

Factors affecting the adoption of Online Auctions by Internet Users in
Hong Kong

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Abstract

This is an exploratory empirical study with the aim to identify the factors that affect the adoption of online auctions by Internet users in Hong Kong. The frameworks used were the TAM (Technology Acceptance Model), TCE (Transaction Cost Economics) and SERVQUAL (Service Quality). It was found that the dimensions that affected the customer's perceived value of the online auction are benefits, costs, risks and service quality.

Data was collected from four pilot focus groups, one online survey and a final focus group. The subjects in the focus groups were 21 undergraduates, whereas the subjects in the online survey were 152 internet users. The results of the pilot focus groups guided the design of the online survey. The results of the survey was analysed using the Kruskal-Wallis test. The final focus group was used to seek explanations to some issues arose from the online survey.

It was found that the factors in the benefit dimension were liquidity, enjoyment, and price transparency. The factors in the cost dimension were time, effort, service charge and reputation of the user. The factor in the risk dimension was financial risk. The factors in the service quality dimension were efficiency and system availability. The final focus group revealed that the auctioneer's role in policing the auction web site was important.

For differences among the subjects, it was also found that the adult users consider their reputation in auction website, young adults are worried about financial risks, and female users are more concerned about financial risks than male users. The implications of these differences are discussed.

The main academic contribution was the development of a questionnaire and a model which can be used in further research about other forms of auction.

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DECLARATION STATEMENT



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Glossary

B2C	Business-to-consumer
BIN	Buy-it-now
Click-and-mortar store	A shop that has both existence in the real world, and in the virtual world of the Internet.
Brick-and-mortar store	A shop which exists in the real world, in contrast to online stores, which only exist in the virtual world.
C2C	Consumer-to-consumer
DOI	Diffusion of Innovation
Dutch Auction	In a Dutch auction, a high opening price is set. Then the auctioneer will lower the price gradually until some bidder accepts the offer.
English Auction	In an English auction, only a single item is up for sale and a low opening price is set. Then the bidders will compete against one another by offering higher prices in turn. The highest bidder wins the item. This is the most common form of auctions on Internet auctions such as eBay.
E-RecS-QUAL	A sub-scale of E-S-QUAL for measuring the quality of the service delivered by web sites during non-routine encounters, such as trying to recover from problems and inquiries.
Escrow	It is a service provided by the auctioneer. When this service is used, the seller doesn't ship out the product until the buyer has paid; and the buyer can get compensation if the goods shipped do not match the seller's descriptions
E-S-QUAL	A multi-item scale for measuring the service quality delivered by web sites.
Forward Auction	In a forward auction, the highest bidder wins. Examples of forward auctions are the English auction and the Dutch auction.
Horizontal slicing	It means the members in a sample are chosen to have very similar backgrounds such as job titles
Name-your-price	In this kind of auction, the buyer specifies what they are willing to pay for the product. Then multiple sellers bid for the business. The product price is fixed and the price offer is non-public. This requires a commitment from the buyer to purchase at that price.
OLA	Online Auction
PCI	Perceived Characteristics of Innovation
PEOU	Perceived Ease Of Use

PU	Perceived Usefulness
Reserve Price	This is the price below which the seller is unwilling to sell the item in an auction.
Reverse auctions	Reverse auctions are auctions in which the lowest bidder wins. This type of auction is popular in business-to-business electronic-commerce
SERVQUAL	The SERVQUAL was a measurement instrument for service quality. It was developed by Parasuraman et al. in 1988, based on the Gaps Model put forward by Parasuraman et al. in 1985.
Sniping	The buyer for an item does not place any bids, but closely monitor the bids placed by other bidders. Then the buyer bids just before the closing of the auction, leaving other bidders no time to respond. This is known as sniping.
SPEED	School of Professional Education and Executive Development, Hong Kong Polytechnic University
SPSS	Statistical Packages for Social Sciences
TAM	Technology Acceptance Model
TCE	Transaction Cost Economics
Winner's curse	In an auction, the buyer's desire to win is so strong that the winner ends up bidding a price is which more than what the item is really worth. This phenomenon is known as the "Winner's Curse".

Chapter 1 - Introduction

This research is about the factors affecting the adoption of the online auction by internet users in Hong Kong. Firstly, this chapter will explain the differences between traditional in-person auctions and online auctions. Secondly, the importance of online auction in electronic-commerce will be reviewed. Thirdly, the parties and types of online auctions will be explained. Lastly, the methodology and limitations of this research will be introduced.

1.1 Traditional In-Person Auctions and Online Auctions

An auction is a market mechanism that uses a competitive process by which a seller solicits consecutive bids from buyers (forward auctions), or a buyer solicits bids from sellers (reverse auctions) (Turban, King and Lang, 2011). Traditional mass-market merchants generally use fixed pricing – one national price, everywhere, for everyone. The auction sets itself from other forms of business exchange in that the prices are determined dynamically by the bids (Jank & Shmueli, 2010).

To buyers and sellers, the auction offers the advantage of discovering the price of items that does not have a common market value (Laudon and Traver, 2013). If a seller tries assign a fixed price to an item based on the seller's subjective evaluation, the price may be too low, optimal, or too high. If the price is too low, the seller will not get the highest possible revenue from the sale. If the price is too high, the seller will not be able to sell the item at all because no one is willing to pay the price. However, an auction provides a channel for the seller to put the item up for sale using a dynamic pricing mechanism. Any interested buyer can offer the price they are willing to pay for the item. If there are other interested buyers who think the item is worth more than the current offered price, they can offer the price they are willing to pay. The buyer who offers the highest price wins the item. For example, without using auctions, it would be extremely difficult for a merchant to price antique items such as a Greek oil lamp made in 550 B.C. Hence, before the wide-spread use of the Internet, unique items that are difficult to get a public price are often sold through auction houses such as Sotheby. These auctions, also known as traditional physical auctions, are conducted at a specified place, date and time. Traditional, physical auctions are still being used today, but the volume traded on online auctions is significantly larger and continues to grow (Turban, King, and Lang, 2011). In this research, by an online auction, it refers to a web-based auction, where transactions take place on an e-commerce web site.

The Internet provides a low-cost platform to conduct online auctions which allow consumers worldwide to shop for a wide range of goods. The primary advantage of the online auction over the traditional in-person auctions is that many more potential participants can virtually meet in an online auction web site than at any physical location (Ockenfels, Reiley, and Sadreih, 2006). The online auction has become increasingly important as an outlet for a wide variety of products (Easley, Wood, & Barkataki, 2010; Turban, King and Lang, 2011). The other benefits of online auctions will be reviewed in the literature review.

The online auction is a versatile channel that can be used by organisations as well as individuals to buy and sell goods and services. Online auctions have been used to sell items such as small as second-hand household items, advertising space on web sites such as Google, and even corporate takeovers (Rogo, 2010). It is important that online auctioneer play a more active role than just providing a virtual auction room. Firstly, online auctioneers must pay attention to the security aspect to avoid dishonest users taking advantage of the anonymity in the virtual world. Secondly, the online auctioneer has to provide some measures to reduce the amount of risk. Lastly, the online auctioneer has to pay attention to the ethical issues that may arise from the items being auctioned.

Despite the mixed reputation, the online auction is considered as one of the most popular consumer-to-consumer (C2C) electronic-commerce (Laudon and Traver, 2013). Also, books have been written to teach consumers to get the most out of online auctions, or become a successful seller oneself (Heid and Malina, 2006; Seifert, 2006; Adams, 2007; Collier, 2011;). Although the online auction is very popular among online consumers, there are a lot of challenges that online auctioneers have to overcome. These challenges will be discussed sections 2.3 and 2.4 in the literature review. The overall aim of research is to find out the factors that affect the Internet user's adoption of online auctions in Hong Kong, so as to enable online auctioneers to achieve competitive advantage through a better design of their service offerings.

1.2 The Phenomenon of Online Auctions

The online auction has become a popular form of e-commerce for consumers to purchase the goods and services they want online. The online auction is even heralded as probably one of the most successful and profitable businesses ever invented (Financial Times, 2010). Online consumer auctions grew tremendously from US\$8.4 billion in 2001 to US\$30 billion in 2007, representing a 24% annual growth rate (Hou &

Boldgett, 2010). Online auctions have a revenue share of 25% of global e-commerce. The online auction web site eBay has over 200 million members (Lackes et al. 2011). Online auctions are expected to grow at around 5% to 10% annually between 2009 and 2013, despite the economic recession (Laudon and Traver, 2013). Companies also regard them so important that established portals and online retail sites, from Yahoo and MSN to JCPenney, are adding auctions to their sites (Laudon and Traver, 2013).

In 2009, C2C auction sites in the United States generated about US\$25 billion in gross revenue, and B2C auction sites generated about US\$19 billion (Laudon and Traver, 2013). In online auction web sites, a buyer can find items range from everyday items such as toys and compact discs (CDs) to homes, used cars and commercial equipment. Moreover, shoppers can find more exotic merchandise such as vintage postage stamps or sports cars on these web sites.

The use of online auction is not limited to products and services for consumers. Internet companies such as Google and Yahoo allocate their online sponsored search listing rankings based on an auction-style mechanism. In this mechanism, merchants place bids for higher positions in sponsored lists that appear alongside with the search results page served to Internet users. It was estimated that 80% of Google's revenue and 45% of Yahoo!'s revenue in 2005 were attributable to sponsored search that were allocated via the auction-style mechanism (Lahaie, 2006). Airline companies, like American Airlines, have successfully used online auctions to sell seats remaining on an aircraft shortly before a flight (Chaffey et al., 2009, p.112; Walker et al. 2010).

1.3 Parties and Services in Online Auctions

The parties in an online auction are the seller, the bidder, the buyer, and the auctioneer. The roles of these parties in an online auction are reviewed below.

Sellers and Bidders

The seller is the party who has an item to sell on the auction (Laudon and Traver, 2013). In a B2C auction website, these will be individual users who happen to have some used items that they don't need any more or some gifts that they don't find useful and want to dispose of. Individuals or organisations (especially charitable ones) may want to dispose items that are given to them as gifts, but are found to be not useful to the individual or organization. The online auction is a good way to turn that gift or used item into money that can be used for other purposes. Holley (2011) called this process

"turning gifts and discards into gold". At the same time, many companies are using Internet auctions to sell their excess stock because of they can do so anonymously and do not risk affecting the image of their brand names (Davis 2009). When the seller is an organisation selling to an individual buyer, it will be a B2C form of e-commerce. When the seller is an individual selling to another individual buyer, it will be a C2C form of e-commerce. The scope for this study is the C2C form of online auctions.

The bidder is the party who offers a price for an item being sold by a seller. The bidder becomes a buyer if his or her offer is the highest bid (Laudon and Traver, 2013). In an online auction web site, a user may take on both the buyer and seller roles. This happens when a bidder for one item, happens to be a seller for another item in the same web site.

Auctioneer

The auctioneer is the web site which hosts the auction. Typically, the auctioneer itself will not participate in the auctioning process, but most auctioneers will provide additional services besides the hosting of the web site. One common service is allowing the buyer and the seller to give a rating after the transaction is done. The ratings received by the buyer and the seller are then make known to all participants (Laudon and Traver, 2013). Another additional service provided by auctioneers is called escrow. Escrow is a risk-reducing service in which the seller doesn't ship out the product until the buyer has paid to the auctioneer as a middleman; and the buyer can get compensation if the goods shipped do not match the seller's descriptions (Antony et al., 2006). The auctioneer earns revenue in several ways. It can earn transaction fees (commission) based on the amount of the sale, list fees for display of goods, and advertising fees where sellers pay extra for displaying their items in more conspicuous positions (such as the top of search results) or in special format (such as highlighting the text with a coloured background) (Laudon and Traver, 2013).

Some auction web sites are operated by one of the parties taking part in the auction, namely, the buyer or the seller. There are seller-controlled auction web sites such as the online auction used by Google to sell the positions in the sponsored list of search-engine-result-pages. There are also buyer-controlled auction web sites such as those used by very big organisations like Ford or governments to get suppliers to bid for contracts for providing goods or services. Typically, the auctions involved in buyer-controlled auction web sites are reverse auctions – see section "Types of Auctions"

below. Finally, there are also auction web sites which are third-party controlled. This is the most popular form of online auctions used by individual consumers (Halstead & Becherer, 2003; Chaffey et al., 2009). Ebay is an example of a third-party controlled online auction website.

User Rating (Reputation System)

The user rating is a common feature found in most online auctions. A user's rating is a summary of the feedback a person has received for his or her purchases or sales in the auction web site. Each time the user completes a transaction, either as a buyer or as a seller, he or she will receive a feedback. The feedback consists of a number and a comment. The number reflects the other party's evaluation of the user in the transaction. There are three types of feedback ratings : positive, neutral , and negative (Adams 2007). The user's rating is a number calculated by summing up all the feedback rating left by other members participating in the same online auction. Some auctioneers try to give the user a quick visual clue reflecting the overall reputation of a buyer or seller. For example, in eBay, the sum of these feedback ratings is shown as a number in parenthesis next to every user name. eBay has also adopted a color-coded feedback rating system. A "Star" is awarded to a user when feedback reaches 10 points. A ranking system correlates different colours and star designs to the number of the feedback (Adams 2007, p.36).

1.4 Types of auctions

There are different forms of online auctions known as English, Dutch, Reverse, and Name-your-price. These different forms are explained below.

The English Auction is the most common form of Internet auctions. Usually, there is a single item up for sale from a single seller. The auction will end at a time limit, determined by the seller. When the auction ends, if there are no bids, or if the highest of the bid is below the reserve price (usually not known to the bidders), the item will not be sold. Otherwise, the highest bidder wins the item. The bidders may bid against one another either anonymously or non-anonymously (Laudon and Traver, 2013).

The Dutch auction is different from the English Auction in that the first bidder wins. The traditional Dutch auction originated from Aalsmeer, Holland, where about five thousand flower growers sell bundles of graded flowers to about two thousand buyers. The Dutch auction uses a clock that shows to all participants the starting price growers want for their flowers. The clock ticks to a lower price every few seconds. When buyers want to buy at the displayed price, they push a button to accept the lot of flowers at that price. If the buyers fail to bid in a timely fashion, they will lose the item to the competitors (Kambil, van Heck 1996). Dutch auctions are now conducted on the Internet such as eBay and OnSale, and these auctions are no longer limited to selling flowers. Also, the rules and actions in these Internet Dutch auctions are different from the traditional Dutch auction, but the basic mechanism is the same. The Dutch Internet auction is ideal for sellers that have many identical items to sell (Laudon and Traver, 2013).

Both the English auction and the Dutch auction are forward auctions, in which the highest bidder wins. The forward auction is popular in business-to-consumer e-commerce (Chaffey et al., 2009).

Reverse auctions are auctions in which the lowest bidder wins. This type of auction is popular in business-to-business electronic-commerce. The bidders in a reverse auction are usually suppliers of some products or services. They compete with one another to try to win business with the company which issues an RFP (Request for Proposal). Since the Internet makes this model more tenable, reverse auctions have become more widely used than previously (Chaffey et al., 2009). In reverse auctions, the bid can be

open or sealed. In a sealed-bid arrangement, the bidders submit their bids in response to an RFP posted to a web site before the set deadline. In an open-bid arrangement, via the auction web site, the bidders can view the bids place by their competitors and make response in real time (Chaffey et al., 2009).

The last type of auctions is Name-your-price. In this kind of auction, the buyer specifies what they are willing to pay for the product. Then multiple sellers bid for the business. The product price is fixed and the price offer is non-public. This requires a commitment from the buyer to purchase at that price (Laudon and Traver 2013).

This research will be focused on the English auction hosted on a third-party controlled web site, as it is the most common form of auction on the Internet.

1.5 Aims and Objectives

The above discussions show that online auctions have an importance place in electronic-commerce and will continue to remain important in the foreseeable future. However, there are difficulties in making an online auction web site successful. There are online auction web sites that once thrived, but have closed down. Examples include SandCrawler.com, FirstAuction.com, Red-dots.com, Go2HK.com and Auctions.com. Since the online auctioneer does not sell products of its own, it can only generate income through collecting service charge and fees for advertisement. Therefore, the survival of an online auctioneer depends on its ability to attract a large population of customers and visitors.

The literature review (Section 2.3 & Section 2.4) will show that the online auctioneer has to face intense competition , and that the online auction has certain characteristics that differentiate itself from other forms of electronic commerce. Hence, there is a need to perform research on online auctions to order to help online auctioneers increase their competitiveness.

Table 1.1 is a summary of previous research related to online auctions. It shows that existent literature on online auctions focused mainly on bidding or selling strategies, reverse-auctions, or a specific aspect of the buyer's decision – such as the effect of user reputation. There is a certainly degree of overlapping in the research areas for the works listed in table 1.1. The student has decided to put each piece of work in an area that best describes the focus of the work. For example, Pandit et al. (2007)'s 10-page article used only less than 1.5 pages to review the literature that related to fraud

prevention, the rest of the article is on the mathematical model (The Markov Random Field Model), the algorithm based on which the software is built, the interface design, how fast the system works on a synthetic database and some implementation issues. Therefore, the work of Pandit et al. (2007) is placed under the research area of “Software tools to detect fraud”.

Table 1.1 Summary of previous research related to online auctions
(Source: Compiled by the student for the thesis)

These research are described in section 2.6.

Research Area	Author(s)
Optimisation of bidding or selling strategies	Bertsimas, Hawkins, and Perakis (2009); Bapna et al. (2008); De Haan et al. (2009); Wu et al. (2009); Giot & Grammig, 2006)
Reverse auctions related to vendor selection	Charki, Josserand And Charki (2011) ; Yenyurt et al. (2011)
Sniping	Ely & Hossain (2009); Krishnappa and Plaxton (2011) ;
Winner's curse	Kagel, et al. (1993), Heyman et al. (2004), and Araujo & Castro (2009)
The effect of current number of bids and bid time on the willingness to spend.	Dass (2011)
The effect of seller's online presentation style on revenue.	Gregg and Walczak (2008)
Fraud prevention, regulation and ethical issues	Snyder (2000) ; Gregg & Scott (2006) ; Nikitkov & Bay (2008)
Software tools to detect fraud	Pandit et al. (2007)

There is a lack of research that provide an overall framework that enables executives of online auction web sites to understand the factors affecting users' intention to adopt online auctions. In particular, this research will collect data from users in Hong Kong. Therefore, the results of the research can serve as a capstone for future research on online auctions in China.

Therefore, the contribution of this study is to help online auctioneers to achieve competitive advantage through providing services that better meet the needs of the

Internet users in Hong Kong. To achieve this, this research aims at identifying the factors that affect the internet user's perceived value of online auctions.

Some previous research about perceived value in traditional and online shopping will be briefly reviewed here, while a more detailed discussion will be provided in the literature review section. Keeney (1999) created a model of customer value components which included quality, cost, delivery time, convenience, time reduction, privacy, enjoyment, safety, and environment impact. The weakness in Keeney's (1999) model is that it does not specify a product or service context. From a service perspective, Petrick (2002) produced customer value model which included monetary price, non-monetary price, reputation and emotional response. In electronic-commerce, Chen & Dubinsky (2003) used a model which consists of valence of experience, perceived risk, product price and perceived product quality. Gupta & Kim (2010) showed that the perceived customer value in online shopping is driven by the dimensions of Convenience, Pleasure, Price and Risk. Smith & Colgate (2007) reviewed 22 articles on customer value written between 1991 and 2005. They concluded that there are four types of customer value – functional, experiential, symbolic and cost. From these research, it can be summarised that there are the four major dimensions of value related to service provision in an electronic-commerce context – benefits, transaction costs, quality and risks. Hence, the following objectives have been established for this research:

- OBJ1: Identify Hong Kong Internet user's perceived benefits of online auctions.
- OBJ2: Identify Hong Kong Internet user's perceived transaction costs of online auctions.
- OBJ3: Identify Hong Kong Internet user's perceived risk of online auctions.
- OBJ4: Identify Hong Kong Internet user's perceived service quality of online auctions.

1.6 Scope

In order to provide a suitable focus for the research, the scope is limited to consumer-to-consumer online auctions in third-party controlled web sites. This means this research will study user perceptions about Internet auctions in third-party platforms such as Yahoo and EBay, involving individual user rather than institutional buyers and sellers. The reasons for having this scope are explained below.

The first reason is that the institutional buyer and sellers may consider benefits, costs, service quality and risks in an organizational context. For this reason, B2B online

auctions, which usually involve industrial goods for use in a vertical value-chain, will not be included. Likewise, it does not include auctions which are controlled by any of the participants. In this regard, the bidding of keywords by advertisers in Google is excluded from this study because the web site is operated by Google itself, The auction is a seller-controlled online auction web site, not a third-party controlled web site. The second reason is that Wareham et al. (2005) and Jones & Leonard (2007) found that, compared with B2C research, there have been relatively few research in C2C e-commerce. Jones & Leonard (2007) advocated that C2C e-commerce research should form a distinct research stream on its own because of its difference from B2C e-commerce. The final reason for having a focus is the constraints on time and resource available to the student for this research project.

1.7 Major Theoretical Frameworks

This exploratory research makes use of three major theories to provide a framework to guide the study. The three theories are

TAM (Technology Acceptance Model)

TCE (Transaction Cost Economics)

SERVQUAL (Service Quality)

Table 1.2 Relationship between the dimensions of customer value and the theories.

(Source: Compiled by the student as part of the thesis).

Theories Dimensions of customer value	TAM (Technology Acceptance Model)	TCE (Transaction Cost Economics)	SERVQUAL
Benefit	Perceived Usefulness		
Transaction Cost	Perceived Ease of Use	Asset Specificity	
Risk		Uncertainty	Privacy *
Service Quality			Efficiency * System Availability * Responsiveness # Compensation # Contact #

* These are the constructs in the E-S-QUAL. (see section 4.4)

These are the constructs in the E-RecS-QUAL. (see section 4.4)

The TAM (Technology Acceptance Model) the TAM mainly explains the benefit, and partially transaction cost aspects of customer value. The TAM is based on the TRA (Theory of Reasoned Action) and the TPB (Theory of Planned Behaviour) (Davis, 1989). The TAM was developed by Davis (1989) to explain the acceptance of technology by users in organizations. The basic constructs in TAM were perceived usefulness (PU) and perceived ease of use (PEOU) (Davis, 1989).

The TCE (Transaction Cost Economics) helps to explain the transaction cost aspect of customer value in this research by considering the transaction cost and risk aspects. In a service context, the transaction cost includes direct cost (service charge), and indirect costs (time, effort and risk) (Teo and Yu, 2005). The direct cost is directly dependent on the frequency of using online auctions and it can be measured relatively easily. The indirect costs can be explained by the the concepts of asset specificity, uncertainty, bounded rationality and opportunism in the TCE. Asset specificity means the lack of ease with which the human capital, physical assets, and facilities specifically tied to the manufacturing of an item can be put to alternative uses (Williamson, 1981). The higher the asset specificity, the less likely that asset can be used in elsewhere. Uncertainty relates to the element of risk involved in the use online auctions. Bounded rationality, in the context of this research, means that the user in an online auction must make decisions based on his limited cognitive power and knowing that there is information asymmetry. The information available on online auctions is often asymmetric, which means the seller has more information about the item than the buyer. Opportunism is also relevant in online auctions. Given the anonymous nature of the online auction, the user may be tempted to take some opportunistic behaviour so as to gain some short-term gains.

The SERVQUAL was a framework for understanding and measuring the dimensions of service quality (Parasuraman et al., 1988). It was based on the Gaps Model. The E-S-QUAL and the E-RecS-QUAL were measuring instruments derived from SERVQUAL for measuring the quality of service provided through the Internet (Parasuraman et al. , 2005). Since this research is about the service provided by online auctioneers, the E-S-QUAL and the E-RecS-QUAL will be used instead of the original SERVQUAL, which was developed before the age of the Internet.

1.8 Methodology Adopted

Section 6.2 will explain the research paradigm, strategy and techniques used for this study. In summary, this research will adopt the Interpretivism paradigm. Stage one will be a pilot study using focus groups, whose purpose is to inform the design of an online questionnaire to be used in stage two. Stage two will be an online survey using a self-administered online questionnaire. The data will be analysed using SPSS. Stage three will be a final focus group to explore some issues identified in the survey stage.

1.9 Limitation and Suggestion

The major limitation of this research is that non-probabilistic sampling is used in the survey stage. The results cannot be generalised to the whole population of Internet users in Hong Kong. However, the result of this research can be used as the first step in developing a conceptual framework for understanding the factors affecting user adoption of online auctions in Hong Kong. The full discussions on limitations and suggestions for further research will be made in chapter 9 “Conclusions”.

1.10 Summary

This chapter explains that the topic of online auctions is chosen because of its importance in electronic-commerce. The aims and objectives of the research have been introduced. The methodology for this research will be based on Interpretivism. The research methods will be pilot focus groups, an online questionnaire, plus a final focus group. The data from the questionnaire will be analysed using the Kruskal-Wallis test.

The remainder of this paper is divided into seven chapters as below:

Chapter 1, which is this chapter, explains the importance of online auctions and sets the scope and objectives of this research.

Chapter 2 reviews of the literature about the characteristics, benefits, and challenges of online auctions.

Chapter 3 discusses the concept of customer value and the four dimensions - benefits, transaction costs, risk and service quality

Chapter 4 reviews the concepts of Technology Acceptance Model, Transaction Cost Economics, and SERVQUAL.

Chapter 5 is a literature synthesis.

Chapter 6 explains the methodology adopted for this study.

Chapter 7 reports the pilot study carried out using focus groups.

Chapter 8 analyses data collected from the online survey and final focus group.

Chapter 9 concludes the findings in this research, states the contributions to both academics and practice, and suggests directions for further research.

Chapter 2 - Online Auctions – Characteristics, Benefits, and Challenges

This chapter will discuss the characteristics and benefits of online auctions. Then it will discuss the challenges facing online auctioneers. These challenges include external threats such as the competition from click-and-mortar firms and pure online retailers such as Amazon.com. A click-and-mortar firm is a shop that has both existences in the real world, and in the virtual world of the Internet. There is also strong rivalry among the online auctioneers.

2.1 Characteristics of Online auctions

The online auction has a number of characteristics that must be reviewed for their implications in this study. Some of these characteristics differentiate the online auction from other forms of e-commerce. Some of these characteristics are shared by the online auction and other forms of e-commerce. Both types of these characteristics have implications in the aspects described in “Chapter Two Literature Review”.

2.1.1 Dynamic Pricing

The most important feature of the online auction is that it allows the creation of a dynamic pricing structure (Davis, 2009). The negotiation of product price is one of the most time-consuming parts of the purchasing process between the individual buyers and sellers. Online auctions greatly improves the efficiency in this process by automating the price negotiation and creating a “fluid” pricing structure that is not commonly found in other forms of e-commerce (Jank & Shmueli, 2010). Online auctioneers even provide automatic agents for bidders. Using the agent, the buyer just needs to enter the highest price that the buyer is willing to pay for the item. Then the agent will automatically monitor the bidding process, and bid a higher price whenever necessary. This greatly reduces the time and effort required on the part of the buyer.

2.1.2 No long-term buyer-seller relationship

The auctioneer does not actually participate in the selling of the products or services, unlike other e-commerce websites such as iTunes and Tesco.com. The auctioneer merely creates a virtual platform for the buyer and sellers to meet and conduct transactions. The auctioneer either collects service charge from the sellers in exchange for auction listing and other services they provide, or earns income through advertisements placed in the web site. Therefore, the online auction users are generally

unknown to one another and a long-term buyer-seller relationship is less likely to be found (Chiu et al., 2010). The spatial and temporal separation of the buyer and seller leads to the problem of information asymmetry and fear of opportunism (Chiu et al., 2010, p.148).

2.1.3 Time Asymmetry and Fulfilment

As the transactions in an online auction are between individual buyer and sellers, the buyer cannot expect the seller to respond in a timely manner, as an institutional online merchant would. An institutional online merchant, such as Amazon or Dell, would have an automated system for handling email enquires and full-time support staff manning hotlines to answer phone calls. However, these facilities are non-existent for individual sellers. The non-simultaneous exchange among the trading parties is the cause of the time-asymmetry and additional risk for the users in an online auction (Chong and Wong, 2005). For example, after the bidding is closed, the auctioneer would send the contact information about the buyer to the seller and vice versa. Then the buyer has to wait for the seller to provide further details about the payment methods such as the bank account number and how the fulfilment will be arranged. The fulfilment can be done either face-to-face, via the post, or through courier service. Finally, the seller has to wait until the payment from the auction-winner is successfully transferred to his or her account before shipping the product or arranging the face-to-face delivery. During this fulfilment time, either the buyer or seller may change their minds and not to complete the transaction.

2.1.4 Risk

Since the buyers and sellers are not in the same venue and the items being bid cannot be physically inspected, there are opportunities for acts of dishonesty (Snyder, 2000). For example, the seller may place false bids in order to lure the buyer to pay more than the fair market value (Nikitkov & Bay, 2008). The time asymmetry and fulfilment characteristics mentioned above mean additional risks for its participants (Chong & Wong 2005; Salam et al. 1998). On the other hand, the seller stands the risk of receiving bids that are not genuine. For example, in 2008, there were so many pranksters who made false bids that eBay was forced to modify the registration system to weed out the flurry of false bids (Douglas, 2008). Hence, one of the biggest challenges in the online environment is user authentication and product/service guarantee (Chong & Wong 2005, Jones & Leonard 2007).

The role of risk in online auctions will be reviewed in the literature review section.

2.1.5 User Rating as a Lock-up Cost

It is common for auction websites to have a rating and feedback mechanism. The purpose of that was to deter fraudulent activities. The rating and feedback mechanism allows the buyer and seller to rate one another after the completion of auction transaction. It is possible that that a user of an online auction may consider his or her own rating as a lock-up cost. It is because if a user switches from one auction web site to another, he or she would loose all the ratings and feedbacks he or she has received (Yen & Lu 2008).

Although the lock-up cost can be high as explained above, the transaction costs associated with conducting and participating (selling and bidding) in online auctions have decreased substantially to the extent that such online auctions still seem worthwhile (Ockenfels et al., 2006).

2.2 Benefits of Online auctions

The benefits to be discussed are of two types. Firstly, some benefits are obtained by conducting the auction online instead of in-person. This type benefits are common to other forms of e-commerce as well. Secondly, some of these benefits are unique to online auctions as a special form of e-commerce. Both types of benefits are reviewed below.

2.2.1 Lower Transaction Costs

The online auction can reduce both direct and indirect transaction costs. The direct cost is the monetary cost for paying the service involved in purchasing an item. The indirect costs are the time and effort spent by the user in the process of purchasing an item.

The direct cost of traditional auctions is high to the seller because it involves paying for the service of using the venue of an auctioneer for a relative short period, usually a few hours or less. The interested parties must be informed about the time and place of the auction through advertisements, and there is the shipping fee for the item to be delivered to the venue for inspection before the bidding starts. The direct cost of traditional auctions is also high to the buyer. They may have to pay for the cost of travelling to the venue to inspect the item, or hire an agent to do it on his/her behalf (Turban, King and Lang, 2011). The online auction greatly reduces the direct cost involved in auctions by requiring a small commission payable to a third-party online auctioneer only (Chaffey et al., 2009). As a result, the seller can gain more customer dollars by offering items directly through online auctions.

Another saving in transaction cost is the indirect cost. Conducting online auctions can greatly reduce the time it takes to determine a product price when compared with traditional negotiations (Charki, Josserand And Charki, 2011).

Firstly, this is because online auctions can take place 24 hours a day, 7 days a week, uninterrupted by holidays and weather conditions. Secondly, the price and information transparency of online auctions can relieve the effort on the user caused by bounded rationality. Finally, the asset specificity in using online auctions is less than traditional auctions. It is because the seller does not have to make a booking for a physical venue every time when there is an item to sell. The account registered on an online auction website can be used for many times. The seller just needs to provide information for each additional item to be sold.

However, it is possible that the lowering in transaction cost may be partly offset by the time cost of waiting for the product to be delivered. This can be longer than normal B2C electronic commerce as the seller can be a part-time seller who has relatively little time to handle order fulfilment.

2.2.2 Liquidity

In economics and finance, the notion of liquidity is generally conceived as the ability to trade quickly a large volume with minimal price impact. The liquidity of a particular market depends on the number of participants and the number of bids/asks in that market (Giot & Grammig, 2006). In electronic commerce, the term liquidity has a similar meaning. According to Turban, King and Lang (2011), liquidity in e-commerce context means “number of participants and transaction volume”.

In an auction, if the liquidity is high, then it means there are many buyers and sellers present in the market and the number of bids/asks are high. This high presence and active participation allow the seller to find many buyers who are interested in their items. This in turn means the competition among the buyers will drive the winning price to the seller's favour. On the other hand, if the liquidity is low, the sellers will only receive a few or even no bids for their items, resulting in considerable negative impact on the winning price or a failure to sell the item altogether. When there are many more sellers relative to the number of buyers, then there is a pressure to drive the price downwards, which is to the advantage of the buyer. This effect is due to the price transparency in online auctions.

Traditional auctions require all participants to be present in a single room and the auction process can only take place during normal business hours. Both factors limit the liquidity of the auction process. The online auction allows buyers and sellers to participate from anywhere in the world. This benefit is for sellers because they can liquidate large quantities quickly (Turban, King and Lang, 2011; Laudon and Traver, 2013). Liquidation can also refer to the process of converting a company's asset into cash to pay its debtors when it goes bankrupt. Auction is often employed as a way to sell off the company's asset (Eckbo & Thorburn, 2003). In fact, one online auction web site, Liquidation.com, emphasized this benefit so much that it used the term liquidation as the web site's name (Davis, 2009).

Maintaining high liquidity is extremely important to an online auction web site. In 1998, a partnership of eight U.S. newspaper companies, including Times Mirror, launched a web site called Auction Universe. However, even with the huge sponsorship behind it, Auction Universe was not able to attract enough customers to be viable. As of 1999, the number of items listed was only 24,000 on Auction Universe, compared with 2.6 million on eBay (Bradley, 2001). Eventually, it was shut down in August 2000 because it failed to attract enough customers to achieve a high enough liquidity (Schneider, 2013). This incident shows that it is necessary to find out the factors that are important to attract buyer and seller to an online auction.

2.2.3 Entertainment

Research related to shopping behaviour has recognized the fun and enjoyable aspect of shopping in both online and offline environments (Holbrook & Hirschman 1982; Childers et al. 2001). In the offline environment, Holbrook & Hirschman (1982) indicated that consumers often seek fun, fantasy, playfulness, sensory stimulation, and enjoyment while shopping. In the online environment, Childers et al. (2001) found that the attitude of consumers for online shopping is favourably affected by the degree of interactivity that a web site offers.

Participation in online auctions can be entertaining and exciting (Wolfinbarger, 2001; Turban, King and Lang, 2011; Solomon, 2011; Laudon and Traver, 2013). The excitement during online auctions is comparable to those found in gambling. This is because in auctions, the bidders wait in expectation to win, and often react emotionally to being outbid in the final moments of the auction (Jank & Shmueli, 2010).

Wolfinbarger (2001) found that online shopping behaviours could be divided into two types according to their motivations - experiential shopping and utilitarian shopping. Utilitarian shopping is task-oriented, efficient, rational, and deliberate. The utilitarian shoppers have clearly defined requirements of the features for the product being sought. They want to complete the purchase as quickly as possible without distraction (Wolfinbarger, 2001). Experiential shoppers have an ongoing, hobby-type interest. In online auctions, experiential shoppers enjoy the thrill of the hunt as much as the acquisition of the items they want to shop (Wolfinbarger, 2001). Experiential users are driven by intrinsic motivation, that is, they carry out the behaviour for its own sake. In auctions this kind of behaviour is found as browsing the site without acute demand, or as spontaneous bidding near the end of an auction (Möllenberg, 2004, p.365)

The experiential benefits of online auctions include the frequent change of products, products being unusual, unique or collectible, and the element of excitement (Wolfenbarger, 2001, p.47). The frequent change of product attracts hobbyist shoppers to frequently and regularly check for new products of interest. Unusual or unique product give experiential shoppers a “good surprise” when they found products they they had no idea that they existed (Wolfenbarger, 2001). Babin et al. (1994) found that consumers that rated high value in their shopping experience may describe “the shopping trip felt like an escape” and “I felt a sense of adventure” (Babin et al., 1994, p.651)

The prospect of winning in an auction can create a sense of accomplishment or a thrill of feeling (Schindler 1989). The bidders may derive utility from merely being the winner of an auction (Holt and Sherman 1994). The competitive nature of online auctions can lead to emotional reactions such as excitement, joy, and a desire to win (Hou & Elliott 2010).

2.2.4 Price and Information Transparency

One unique feature of the online auction that makes it different from other forms of e-commerce is the bid history. The bid history lists the sequence of bids placed over time and the bidders can view it before making bidding decisions (Jank & Shmueli, 2010; Charki, Josserand And Charki, 2011). It is difficult for merchants to engage in price discrimination. Price discrimination means the merchant’s charging different prices to different customers. However, the seller in an online auction can still exploit price discrimination to a limited extent through the use of “BIN” (buy-in-now) price. That means if the buyer wants to purchase the product in an auction, but he or she does not want to wait for the auction to close, he or she can bid at the BIN, and that will cause the auction to end immediately.

The price transparency is to the advantage of the buyer because it will result in a generally lower price than would have been determined otherwise, such as through negotiations or tendering (Emiliani, 2000; Laudon and Traver, 2013). In negotiations and tendering, the buyers will submit their price and other terms in private to the seller. This way, the buyers do not have much information about how the others buyers value the product that is being sold. The buyer can only submit their best offer. When negotiations or tendering are done in offline channels such as phone calls, meetings and postal mail, the whole process is expensive in terms of time and human effort. But even

when the negotiations or tendering are done through the internet, the price transparency is still low, when compared with online auctions. For example, Priceline.com offers a pricing mechanism that is based on tendering. The “Name-Your-Own-Price” mechanism of adopted by Priceline.com allows the buyers to suggest a price, plus other terms, instead of having to purchase at the seller's price (Turban, King, and Lang, 2011). However, price transparency is low in such pricing mechanisms because consumers are only able to suggest a price, but they are not aware of how many other customers are willing to pay for the same product or how much they are willing to pay (Granados et al., 2005).

In contrast, online auctioneers today such as eBay and Yahoo! allow the participants to see the complete bidding history, including who placed the bids, the bidding amount and the time of the bid. Additional information that may affect the bid is also disclosed such as the questions and answers between a bidder and a seller about the items. This availability of information is unparalleled in the past before the age of the Internet (Granados et al., 2005; Turban, King and Lang, 2011).

2.2.5 High Efficiency for Niche Markets

Online auctions provide the consumer with a wide selection of goods that would be difficult to find otherwise (Ockenfels et al. 2006; Solomon, 2011). The online auction can bring together people who share narrow interests but are geographically dispersed. Online auctions can achieve that by either catering to a narrow interest in the form of niche web sites, or by providing a general auction web site that has sections devoted to specific interests (Schneider, 2013). For example, JustBeads.com caters to buyer and sellers who are geographically dispersed but share highly focused interests. Other examples of niche web sites are CigarBid.com and Golf Club Exchange which target people with higher levels of disposable income.

These specialized niche auction web sites can successfully coexists with large general sites such as eBay, who also offers sections that are devoted to specific interests (Laudon and Traver, 2013). In general, third-party controlled web sites such as eBay, even the individual seller can sell low liquidity items such as used clothing by providing non-catalogue style information such as real pictures of the item to be auctioned, links to other related web sites that can provide more information about the item. Collectibles (e.g., baseball cards, porcelain dolls, rare comic books, etc.) are made more transactable in the same way (Granados et al., 2005).

After reviewing the benefits of online auctions, the following two sections will discuss the challenges faced by online auctioneers. The first section will discuss the competition from outside and within the industry. The second section will discuss challenges of the lack of physical presence, the reliance on self-service, and the web site response time and availability.

2.3 Competitions

For online auctioneers like eBay, the online auctioneers are facing intense competitions from click-and-mortar firms, other e-commerce firms such as Amazon, or even other online auctioneers. These competitions will be discussed below.

2.3.1 External Threats

Firstly, the click-and-mortar firms that compete against the online auctioneers include large retail chains with online sales channels such as Wal-Mart or Tesco (Lamiman, 2008). These firms have a physical presence in the real world in the form of shops, such as Wal-Mart supermarkets. In these physical shops, customers can see, touch and even try the products before they make a decision to buy. At the same time, many of these firms also offer web sites where customers purchase the goods from them online.

Secondly, other e-commerce firms such as Amazon and Yahoo are part also a threat to the online auctioneers. Fowler (2009) reported that eBay's rivals such as Amazon had "gained ground with an ever-growing selection of fixed-price items and often with free shipping". Moreover, search engines and comparison-shopping sites, such as Kelkoo, have also chipped away at eBay's auction system, by making bargain items easier to find on other sites. In fact, in 2002, eBay withdrew from Japan because of the intense competition from Yahoo (Ankush, 2010).

2.3.2 Internal Rivalry

The online auctioneers have to compete against one another as well. The internal rivalry among the online auctioneers consists of two kinds. On one hand, there is the typical online auction auctioneers such as Yahoo!Auction competing against eBay. On the other hand, there are online auction web sites set up by local communities which are of particular interest to local residents. They are popular to local residents because they can easily finish the transaction without waiting a long time for fulfilment. Some communities are setting up their own auction web sites, often with the purpose to sell their surplus goods, so that they can clear space and make some money at the same time. An example of this is www.PropertyRoom.com, which was set up by former police officers. This web site specialised in the auction of stolen, seized, found and surplus goods and vehicles (Morgan 2009).

As a result of the intense competitions mentioned above, many online auctioneers only managed to achieve modest growth and profit. For example, by July 2010, eBay saw

only a 4% quarter-on-quarter growth in the total number of user in the U.S. This happened after eBay saw no growth in U.S. users for several quarters before that (Financial Times, 2010). Even the 226-year old UK auctioneer Sotheby had trouble with its online auction operations. In January 2002, Sotheby reached a deal with eBay in which Sotheby.com would cease to be a separate entity, but it would continue to sell art, antiques and jewelry through eBay (BBC, 2002).

Yahoo is another example of how a big electronic-commerce player may fail in the auction market, even in its home country. When first offered the online auction service at no charge, Yahoo had some early success in attracting large number of auction participants. However, when compared with eBay, Yahoo was less successful in attracting buyers, resulting in less bidding action in each auction than eBay. When faced with dropping advertisement revenues in its other web operations, Yahoo began charging sellers in January 2001. In less than one month, Yahoo lost about 80 percent of its auction listings. In 2005, Yahoo reverted to its original policy of not charging fees to sellers. Finally, Yahoo was unable to draw enough buyer and seller to its U.S. auction site, and the company closed the operation in 2007 (Schneider, 2013).

2.4 Other Challenges facing Online Auctioneers

Besides the internal and external competitions mentioned above, the online auctioneers also have to face some other challenges. These other challenges are reviewed below. Some of these challenges that face the online auctioneer arise because it as a form of e-commerce, while the other challenges are more severe to online auctioneers. For example, most consumers cannot examine the real product before purchasing an item from a web site. In the case of online auctions, this problem is more severe because the seller may be selling used items, which may have a certain degree of damage or aging effect. These are not easily revealed through photos and videos, even if the seller is very sincere to tell the truth.

2.4.1 Lack of Physical Presence

As a form of e-commerce, the online auction faces many of the challenges that online shops have to face. These challenges late delivery, overpayment for goods delivered, high shipping cost, poor customer service, and potential return hassles (Lee, 2002). In contrast, , the brick-and-mortar stores have the advantage of allowing the consumers to touch and feel the merchandise before they buy (Lee, 2002). To the online auctioneers,

these challenges are bigger than other forms of e-commerce because they don't have direct control over the quality and delivery of the products being sold on their websites.

2.4.2 Reliance on Self-service Model

Another challenge for online auctioneers is that they have to rely on the self-service model. The e-commerce consumer is system user - a web site system user (Gefen et al, 2003). However, unlike a system user within an organisation, the e-commerce consumer receives minimal organisational support, if any. The typical web site user has no training before they browse the web site for the first time. The e-commerce consumer will not read any user guide before using the system either. The online auction is a kind of self-service technology, which is more demanding on the user than normal online browsing. If a web site is perceived as difficult to use or of poor quality, the consumer will just switch to the competitor, which is just one click away.

A major difference between the online auction and other forms of e-commerce is that other online-shops have a standard layout and standard payment and delivery procedures, but the individual sellers in online auctions can vary greatly in these procedures. An online shop such as Walmart or Tesco provides a virtual shop with one consistent shop layout. The products in the online catalogue are all brand new items from the same brands available in the physical shops. There is one consistent way of displaying the products. The payment terms, delivery charges and refund policy apply for the whole online shop. However, the online auction is basically a collection of many different sellers. They may put their merchandise in different categories. For example, the same set of earphones can either be listed as Accessories under the Mobile Phone category or as Earphones under the Audio/Visual Equipment category. The choice would be based on the personal choice of the seller when the product is being listed in the auction website. Likewise, product descriptions, payment terms, delivery modes and charges may vary across sellers.

2.4.3 Web site Response Time and Availability

Another issue with quality is the response time of the online auction web site. To the normal online shopper, completing an online transaction at 10:59pm or 11:01pm makes little difference. However, the online auction is a time-sensitive service (Zhu, 2010). If the bidder cannot place a bid successfully before an auction closes, the bidder would be very dissatisfied and may not use the online auctioneer again. On 11 Jan, 2011, one of

the eBay's web sites was down for about two hours. The result is that many web pages ran into timeout errors. This was actually the second outage the hosting service had experienced in less than two months. Not surprisingly, the users of the web site voiced out their anger about the downtime in discussion forums. This dissatisfaction may lead to some of the eBay's customer to choose not to buy and sell items on web sites other than eBay.

The overall effects of these challenges is that it is difficult to get consumers' acceptance online auctions as an useful, easy-to-use and risk-free online purchase channel. The following section will review the previous research related to online auctions, in order to see if there is already existing theories in this area that may help help online auctioneers understand the factors affecting the internet user's adoption of online auctions.

2.5 Previous Research related to Online Auctions

Given the characteristics and importance of online auctions, it has been the subject of a lot of research. Some of the major areas of research related to online auctions are reviewed below.

There are studies based on mathematical models, trying to establish optimal bidding or selling strategies for the participants to maximise their returns. Examples are the research done by Bertsimas, Hawkins, and Perakis (2009), Bapna et al. (2008), De Haan et al. (2009), and Wu et al. (2009). Another example is Giot & Grammig, 2006's study of liquidity's impact on price equilibrium in an automated auction market. These research used mathematical models that reflect the outcomes of the interactions between the users in online auctions. However, they did not study the perceptions of the users and did not seek out the factors that may explain why the users behaved the way they did.

Reverse auctions, as a specific form of auctions, has been the subject of studies related to vendor selection in outsourcing projects or supply chain management. Charki, Jossier and Charki, (2011) studied the ethical aspects of online reverse auctions used by large buying firms. Yenyurt et al. (2011) studied the supplier perceptions of opportunism and the complexity of the decision making processing. They found that if suppliers have previously submitted many bids in the online auction, they tend to submit more subsequent bids, suggesting an escalation of commitment dynamic that may underlie the potential for a bidding frenzy.

The buyer's behaviour in Internet auctions has also been the subject of studies, but limited to only one aspect of the buyer's decision is studies. Ely & Hossain (2009) investigated the benefit of sniping in online auction markets. Their online field experiment found that sniping led to a statistically significant, but only a small increase in the average surplus. Krishnappa and Plaxton (2011) proposed a dynamic adjustment scheme that discourages sniping by providing incentives to bid early in the auction. The phenomenon of winner's curse was studied by Kagel, et al. (1993), Heyman et al. (2004), and Araujo & Castro (2009). Their focus was on the strategy of bidding and how to avoid over-paying on the part of the bidder. Antony, Lin and Xu (2006) did an experiment to identify factors that affect the behaviour of buyers in an Internet auction market to adopt online escrow services (OES) or not. Dass (2011) studied how the willingness to spend was affected by the current number of bids and bid time.

Actual field testing using experimental auctions is possible because of the low costs involved. For example, Gregg and Walczak (2008) set up two real operating web sites - one appeared very professional while the other one provides the absolute basic information. The purpose was to study the relationship between the appearance of an Internet auction business and consumer's willingness to purchase. Their finding was that there is a positive relationship between an Internet auction's business appearance and the consumer's willingness to purchase, resulting in an increase in prices received.

There were research that focused on fraud prevention, regulation and software tools to detect fraud. Snyder (2000) reviewed the steps taken by online auction houses to deal with online fraud. Gregg & Scott (2006) researched if online reputation systems are useful in reducing on-line auction fraud. Pandit et al. (2007) developed a software called "Netprobe", which can detect fraud in online auction networks. Nikitkov & Bay (2008) studied the ethical issue of online auctions such as that of sellers trying to increase the price by placing a new fake bid after a bidder has placed his or her bid.

But the research related to the factor affecting the Internet user's adoption of online auctions is non-existent. There is a need to fill this gap in knowledge about online auctions. The next two chapters will discuss literature that is relevant to this research. Chapter Three will discuss the central role of customer value in all businesses and the dimensions that constitute customer value. Based on the dimensions of customer value, Chapter Four will review the relevant theories.

Chapter 3 - Literature Review – Customer Value

Businesses which provide products or services can be regarded as creating value for customers, and customer value is the key to the long-term success of these businesses (Porter, 1985; Sweeney & Soutar, 2001). The online auctioneer is a company that provides only one product - the service of online auctions, so the creation of value for online customers is especially important to the online auctioneers.

It was shown in previous research that excellence in value of products and services delivered to customers led to customer loyalty, and customer loyalty in turn led to good financial results (Heskett et al., 1997; Reichheld, 1994). It is because when customers perceive great value in a company's products and services, they are more likely to repurchase from the same company. Also, these customers are more likely to spread-the-word around by mentioning their favourable experience in using the company's products and services. The relationship between customer retention and profit was confirmed by Reichheld & Sasser (1990) and Reichheld (1994). In electronic commerce, the same importance of value has also been confirmed in empirical studies. Yang and Peterson (2004) found that for users of online services, such as financial and online retailing, value is directly related to customer satisfaction and customer loyalty. Gupta & Kim (2010) and Mosavi & Ghaedi (2012) reported consistent findings.

It may be obvious that customers of online auctions they seek low prices, but according to a survey on online shoppers, price was not the most considered attribute of online retailers (Chaffey et al., 2009). The top-five most considered attributes were, in order of importance, support, fulfilment, product content, privacy and ease of ordering (Chaffey et al., 2009). As the online auction has some characteristics that make it different from other forms of electronic-commerce, the internet user's adoption of the online auction may be affected by a different set of factors.

In the context of online auctions, there are two prices involved. The first one is product price, which is the winning bid for the item being auctioned. The second one is the service price. The service price is the monetary cost of using the auctioning service. The seller has to pay the service fees charged by the . The buyer has to pay the shipping cost involved. The service price of using the online auction is very low, although not zero (Laudon and Traver, 2013). Hence, it is important for online auctioneers to seek to improve the value of its service to the buyer and seller, instead of trying to compete by lowering the service prices even further. However, the concept of value is one of the

most overused and misused concepts in social sciences in general and in management literature in particular (Leszinski and Marn, 1997). The following sections will review some existent literature related to customer value.

The structure of this chapter is as follows. Firstly, the concept, importance of customer value is discussed. Secondly, the four major dimensions of customer value – Benefits, Cost, Risk, and Quality are critically reviewed. Then the theoretical frameworks that linked these dimensions together are discussed. These frameworks are the TAM (Technology Acceptance Model), TCE (Transaction Cost Economics) and SERVQUAL.

Khalifa (2004, p.646) found that the management literature on value is clustered generally around three categories of value: shareholder value, stakeholder value, and customer value. Different scholars rated the importance of these different categories of values differently.

Economists such as Rappaport (1987) argued that company strategies should be selected based on the shareholder value approach. The argument was that strategies that created the greatest shareholder value would develop the greatest sustainable competitive advantage. However, Grönroos (2000, p. 9) disagreed with this view by stating that it was the profits obtained from customers that really produced financial performance. In the same vein, Kaplan and Norton (1996) pointed out that shareholder value, as reflected in the stock exchange, was the result, not the drive of sustainable competitive advantage.

Compared with the shareholder approach, the stakeholder approach is much broader in scope. It is suggested that the stakeholder approach to value should be adopted when a company formulated its strategies (Gomez, 1999 ; Langtry, 1994; Normann and Ramírez ,1994). Both Gomez (1999) and Langtry (1994) stated that because a company had social responsibilities, in addition to its responsibility towards shareholders. They believe that stakeholders such as employees, consumers, and society at large should be given the opportunity to participate in setting the future direction of the firm in which they have a stake. This view was echoed by Normann and Ramírez (1994) who stated that the meaningful purpose for a business firm must be to create and deliver: customer value, co-worker value, social value, and shareholder value. While the stakeholder approach in strategy formulation is meaningful and socially responsible, it does not provide a feasible focal point for a company to improve the creation of superior customer value.

Customer value is considered central to competitive advantage and long-term success of business organisations (Woodruff, 1997; Moon and Kim, 2001; Joo, 2007). In fact, many scholars deemed that customer value was the source of all other values such as Shareholder Value and Stakeholder Value (Treacy and Wiersema, 1995; Hammer, 1996; Lemon et al., 2001). Furthermore, there was evidence that companies that superior value to customers led to customer loyalty, and consumer loyalty in turn led to sustained financial performance (Reichheld et al., 2000; Zhu, 2010).

It is important for companies to understand that the perception of value by the customer is the most important part of the provision of value. Sirdeshmukh et al. (2002) found that customer's behavioural intentions of loyalty were regulated by their perceived value. The consumer will remain loyal to the service provider as long as they perceive getting superior value from the service provider. Similar research performed by Bolton & Drew (1991) and Sirdeshmukh et al. (2002) also identified perceived value as a major determinant of customer loyalty in such settings as telephone services and retailing services.

In the context of online auctions, there may be two sources of customer value. It can be either the value of the service provided by the auctioneer to the user, or it can be the value of the product purchased by the buyer from the auction. As the aim of this study is to help online auctioneers to provide better service offerings to attract online users, the customer value in this research is that derived from the using the service provided by the auctioneer, not from using the product that is being auctioned.

3.1 Definitions of Customer Value

Customer value has long been regarded as the fundamental basis for all marketing activities (Crosby, 1979; Holbrook, 1994; Yang and Peterson, 2004). According to Crosby (1979), value is an elusive construct that is often mistaken for imprecise descriptions such as "goodness" or "luxury". It is not surprising to find there is a wide range of definitions for value. Rappaport (1987, p.59) stated a very standard definition of value in economics as "what buyers are willing to pay". This definition was criticised by Parolini (1999) that value was seen as taken by the company from the buyer. This definition basically viewed price and value as synonyms. There was no consideration about the consumer's judgment or assessment of the worthiness of the product or service being purchased. Bandura (1986) gave a definition for value, from a social cognitive perspective. He defined value as a judgment or assessment for objects

from the subject's perspective (Bandura, 1986). Although this definition took into consideration the customer's perspective, this definition did not point out what was being assessed. This definition shed no light in research related to marketing or consumer behaviour related to customer value.

In order to enable marketers to study the ways value are important to customers, there is a need to understand what the components of value are. But in order to interpret the components of value in the right context, it is necessary to clarify who the customers to online auctions are.

3.2 Who Are The Customers To The Online Auctioneer?

It is necessary to clarify the meaning of the word "customer" when it is used in this study about online auctions. In general business context, a customer is a person or party who purchase an item or service. In this sense, the word "customer" can either refer to the user of an online auction as a buyer or bidder, , or it can mean the seller, who has to pay for using the services offered by the online auctioneer. In this research, the word customer is defined as the buyer or seller who uses the service of online auctioneer, either as a seller or a buyer. The following discussion about "Network Economies of Scale (Tapscott & Tapscott, 1999) will explain why it is necessary to include both the buyer and seller as customers of an online auction.

In a networked market, the greater the number of people connected, the greater the value of being connected, thus creating network economies of scale. For example, a person will perceive no value in being the only person in the world who owns a telephone. However, as the number of people who own telephones rises, the value to any one individual of hooking up increases progressively. This is known as Network Economies of Scale (Tapscott & Tapscott 1999). Laudon and Traver (2013) also described the same principle and they called advantage the "Network Effect". This self-reinforcing dynamic builds powerful monopolies (Tapscott & Tapscott 1999).

The online auction is a form of networked market. Therefore, the value to the customer depends on the number of participants in the web site. The larger an auction site becomes in term of visitors and products for sale, the more valuable it becomes as a marketplace for everyone by providing higher benefits associated with online auctions (Laudon and Traver, 2013). It can be seen that the online auctioneer must attract both

buyers and sellers, although it is only the seller that has to pay commission to the online auctioneer.

In an online auction context, the users are individuals who are using the online auctioneer's service. These individuals can be buying or selling items in the online auctions. Furthermore, they can play both roles at the same time. For example, an individual can be listing an item for sale, while he or she is seeking to buy some other item(s) in online auctions. In this research, the author will use the term customer to refer to the individual who are using the online auctioneer's service, either as a buyer or a seller.

The following section will review previous research that is related to customer value, and then discuss the four dimensions of customer value – Benefits, Costs, Risk, and Service Quality. Then the theoretical frameworks of the Technology Acceptance Model (TAM), the Transaction Cost Economics (TCE), and SERVQUAL will be reviewed.

3.3 Dimensions of Customer Value

One of the early attempts to precisely define value was the exploratory study by Zeithaml (1988). The study involved the use of focus groups and thirty in-depth interviews. Zeithaml found that the patterns of responses from the exploratory study can be grouped into four consumer definitions of value (Zeithaml, 1988). :

1. Value is low product price.
2. Value is whatever I want in a product.
3. Value is the quality I get for the price I pay.
4. Value is what I get for what I give.

Based on these patterns of responses, Zeithaml claimed that value can be captured in one overall definition - "perceived value is the consumer's overall assessment of the utility of a product based on perceptions of what is received and what is given" (Zeithaml, 1988, p.14). Although Zeithaml (1988) gave this "overall" definition, he did note that "what is received" varied across consumers. For example, some consumers may want quantity (e.g. more juice for the same price), while some consumers may want convenience (e.g. can buy the juice anywhere). Likewise, she also noted that "what is given" also varied across consumers. For example, some consumers may be concerned with the money they spent, while other consumers may be more concerned

with the time and effort they spent. To sum up, Zeithaml (1988, p.14) noted that perceived value is "a trade-off of the salient give and get components".

It is important to note that the price in Zeithaml (1988)'s research above was referring to product price. This research is about the service provided by the online auctioneer, not the product that the bidder intends to bid in an auction. To the auctioneer, it is the customer's perception of the value of its service that matters most, because that is what affects the customer's willingness to use the service from the online auctioneer again. The discussion of price in this section is referring to the service price. Whenever there is a possible confusion, the terms "product price" and "service price" will be used as appropriate. There are other reasons to justify the exclusion of the product value from this research. Firstly, given the great variety of items being auctioned, the inclusion of items in the research has implications on feasibility. Secondly, the items that the customer buys from the online auction may be different each time the customer uses the online auction, so it is more meaningful to investigate the value of the service provided by the online auctioneer. Finally, the online auctioneer has no direct control of the products being auctioned at its web site.

After Zeithaml's (1988) concept of a trade-off of "give" and "get" was produced, other researchers suggested some definitions that were consistent with Zeithaml's. Table 3.1 shows a number of definitions related to the concept of customer value. Many of these definitions contain the concept of "give" and "get". For example, Day (1990) suggested that the perceived customer value was the result of customer's perceived benefits minus customer's perceived costs. Leszinski and Marn (1997) defined value in relation to pricing as the difference between customers' perceptions of benefits received and sacrifices incurred. Woodruff & Gardial (1996) found that the judgment of value results from a trade-off in positive consequences or desired outcomes and negative consequences or costs. Kotler (2000) defined value as "a ratio between what the consumer gets and what he/she gives" (Kotler, 2000, p.11).

Table 3.1 Summary of the definitions of "Value" arranged in chronological order.

(Source: Compiled by the student for the thesis)

Source	Definition for "Value"
Rappaport (1987)	What buyers are willing to pay
Bandura (1986)	A judgment or assessment for objects from the subject's perspective
Zeithaml (1988)	A trade-off of the salient give and get components
Day (1990)	Perceived benefits minus customer's perceived costs
Woodruff & Gardial (1996)	Trade-off in positive consequences or desired outcomes and negative consequences or costs
Leszinski & Marn (1997)	Difference between customers' perceptions of benefits received and sacrifices incurred.
Kotler (2000)	Ratio of what the consumer gets and and what he/she gives. . The consumer gets benefits and assumes costs.
Joo (2007)	Benefits perceived by customers of e-business

In summary, the common thread in all these definitions is that, the customer's perceived value in a product or service is the customer's perception of the net gain from using the product or service after considering the all the benefits and the associated monetary or non-monetary costs.

In order to operationalise measurements and provide context-specific meanings, researchers have defined dimensions for customer value. In this research, it is necessary to review the dimensions of customer value for products, service and electronic commerce. Table 3.2 list the dimensions that are used in previous research related to customer value. Keeney (1999) used a model of customer value components which included quality, cost, delivery time, convenience, time reduction, privacy, enjoyment, safety, and environment impact. But Keeney (1999)'s model does not differentiate between product and service components in the customer value. From a service perspective, Petrick (2002) produced a four dimension model related to customer value. The four dimensions are monetary price, non-monetary price, reputation and emotional response (Petrick, 2002). In electronic-commerce, Chen & Dubinsky (2003) used a model of perceived consumer value which consists of four dimensions - valence of experience, perceived risk, product price and perceived product quality. Chen &

Dubinsky (2003) defined valence as a consumer's emotional or attitudinal state aroused by on-line shopping experience. Gupta & Kim (2010) showed that the perceived customer value in online shopping is driven by the dimensions of Convenience, Pleasure, Price and Risk. Smith & Colgate (2007) reviewed 22 articles on customer value written between 1991 and 2005. They concluded that there are four types of customer value – functional, experiential, symbolic and cost. It is noted that Smith & Colgate (2007, p.14) has placed the element of risk under the “cost” dimension. From these research, it can be summarised that there are the four major dimensions of value related to service – benefits, transaction costs, quality and risks, as shown in table 3.2 below. The next section will discuss each of these dimensions.

Table 3.2 The dimensions of customer value related to product and service
(Source: Compiled by the student for the thesis)

	Source					
Dimensions of Customer value	Keeney (1999)	Petrick (2002)	Chen & Dubinsky (2003)	Gupta & Kim (2010)	Smith & Colgate (2007)	Williamson (1981)
Benefit	Time Reduction, Enjoyment	Reputation, Emotional Response	-	Pleasure	Functional, Hedonic, Symbolic	
Transaction Cost	Cost, Time	Monetary Price, Non-Monetary Price	-	Price	Cost	Asset Specificity
Risk	Privacy	-	Risk	Risk	Risk (Under The Cost Dimension)	Uncertainty
Service Quality	Delivery Time, Convenience	-	Valence Of Experience	Convenience	-	
Product-related	Product Quality, Safety, Environment Impact	-	Product Quality, Product Price	-	-	

3.3.1 Benefits

Boyd & Walker (1990, p.14) summarised the importance of benefit as “when people buy products to satisfy their needs, they are really buying the benefits they believe the products provide rather than the products per se”. The word "utility" is often used to explain the meaning of benefit. For example, Zeithaml (1998, p.14) stated that "Perceived value is the consumer's overall assessment of the utility of a product based on ...". Sheth, Newman & Gross (1991) also used the word "utility" in their definitions of benefits (See the "Sheth-Newman-Gross model" below). The same importance of benefits also applies to service. According to Gummeson (1997), consumers do not buy goods or services, but rather purchase offerings that render services, which create value. Pine et al. (2010) concurred to this view. They emphasized it is not what the customer purchases, but what the service provided by that purchase does for the customer, that matters. In auctions, the buyers and sellers are seeking to get the benefits provided by the auctioneer to enable them to find trading partners to complete their transactions successfully and efficiently. Therefore, the buyers and sellers will choose the online auctioneers that they think are able to provide the best service. This consideration of benefits in choosing an online auctioneer is the same as the consideration when choosing a product to buy.

The research done by various authors regarding the benefits facet of perceived value are consistent in that they all consider benefits as a multi-dimension concept. Moreover, they all included a functional dimension, although Ruyter et al.(1997) used the word “Practical” instead of “Functional”. The non-functional dimensions include Emotional, Social, Epistemic, Conditional and Logical (Sheth et al., 1991; Ruyter et al., 1997; Sweeney & Soutar, 2001; Sanchez et al., 2006; Kotler 2000). Table 3.3 summarises some of the dimensions of benefits. Then a discussion of these dimensions will follow.

Table 3.3 Dimensions of benefits
(Source: Compiled by the student for the thesis)

	Dimensions of Benefits		
Source	Functional / Practical	Emotional	Others
Sheth, Newman, & Gross (1991)	Functional	Emotional	Social, Epistemic, Conditional
Ruyter et al. (1997)	Practical	Emotional	Logical (Service quality and price)
Sweeney & Soutar (2001)	Functional	Emotional	Social
Sanchez et al. (2006)	Functional	Emotional	Social
Kotler (2000)	Functional	Emotional	

3.3.2 The Sheth-Newman-Gross model of Benefits

Sheth, Newman & Gross (1991, p.160) created a five-dimension model to explain why consumers made the choices they did, using a sample of size 150 – consisting of smokers and non-smokers. The five dimensions they used were functional, social, emotional, epistemic, and conditional benefits. Their model is known as the Sheth-Newman-Gross model.

(Sheth et al., 1991, p.160-162) gave the following definitions for each of the five dimensions as follows. The functional benefit of a product was defined as “the perceived utility acquired from a product’s capacity for functional, utilitarian, or physical performance” . The social benefit of a product was defined as “the perceived utility acquired from a product’s association with one or more specific social groups” . The emotional benefit of a product was defined as “the perceived utility acquired from a product’s capacity to arouse feelings or affective states” . The epistemic benefit of a product was defined as “the perceived utility acquired from a product’s capacity to arouse curiosity, provide novelty, and/or satisfy a desire for knowledge” . Entirely new

experiences certainly provide epistemic benefit. The conditional benefit of a product was defined as “the perceived utility acquired by a product as the result of the specific situation or set of circumstances facing the choice maker” (Sheth et al., 1991, p.162). For example, some products only have seasonal benefit (e.g., Christmas cards), and some are associated with “once in a lifetime” events (e.g., a wedding gown).

Since this study is about the services offered by online auctioneers, not all the dimensions in the Sheth-New-Gross model about products can be applied. The following section reviews some generic and parsimonious models that are more relevant to the concept of benefits in a service context.

3.3.3 Generic and parsimonious models of Benefits

While the Sheth-Newman-Gross model contains five-dimensions, other scholars have developed some generic and parsimonious models that are more suitable for practical use. Ruyter et al. (1997), used a three-dimension model in the study of the service delivery process in an art museum. Firstly, the practical dimension pertains to the utilitarian aspects of a service encounter. For example, a short waiting time for a service will be high in the practical dimension. The practical dimension actually is equivalent to the functional dimension of the Sheth-Newman-Gross model. Secondly, the emotional dimension of a service delivery process represents the affective appreciation of the process of a service encounter, regardless of the actual outcome. For example, if the consumer feels that the service staff treats him or her politely, the service will be high in the emotional dimension, despite the fact that the consumer does not get what he/she wants in the end. Finally, the logical dimension concerns the inherent relationship between sacrifices and returns. In a service encounter situation, the service quality together with price constitutes the logical dimension of benefits (Ruyter et al., 1997, p.233).

It can be seen from table 3.3 that Ruyter et al. (1997)’s and other studies on benefits show that there is always a dimension relate to the practical or function needs of the customer, plus some dimensions that are not directly related to the practical or functional needs. For example, Sweeney & Soutar (2001) suggested that the different dimensions of value are: emotional value, social, functional value. The same dimensions were used by Sanchez et al. (2006), in their study related to study tourism product’s perceived value. Kotler (2000, p.404) simply regarded benefits as having only two dimensions - functional and emotional. The common thread in the above studies was

that benefits can be obtained either by meeting the consumer's practical needs (i.e. by providing functional benefits) or by meeting the consumer's psychological needs (i.e. by providing emotional, social, and epistemic benefits).

In this study, the benefits in question are the utilities derived from using the service of the online auction, not the utility of using the product purchased. In an online auction, the functional benefits include the listing of their products, the search function, the highlighting of seller's products, the automatic-bidding for buyers (Chaffey et al., 2009, p.40). The non-functional benefits include the ease of use, entertainment, the excitement of winning and sections dedicated to specific interests (Chaffey et al., 2009; Schneider, 2013).

In order to be successful in the Internet business in general, and in online auctions in particular, companies must provide both functional and non-functional benefits to its consumers (Mishra, 2009). In this research, the benefit aspects of value will be contained in the Technology Acceptance Model (TAM) (Davis, 1989) under the construct of Perceived Usefulness (PU). The TAM and its underpinning theories will be discussed in section 4.1.

3.3.4 Transaction Costs

Since the perceived costs of obtaining the perceived benefits are the major concern of consumers (Huber et al., 2001; Zeithaml, 1988), it is necessary to study the components of perceived costs. This study concerns the costs of using the online auction service, not the product price. If the service cost, plus the time and effort costs incurred in using an online auction web site is high, it is hard to gain the user's acceptance in using online auctions. Hence, it is important to consider the costs involved in using online auctions.

Many scholars noted that the cost components can be monetary and non-monetary, such as time and effort needed to acquire and use the product or service (Grönroos, 1997; Kotler, 2000; Zeithaml, 1988). This view of the multi-facet of costs was shared by other researchers. Huber et al. (2001) suggested that the perceived costs of a purchase considered include the following: monetary costs; time costs; search costs; learning costs; emotional costs; and, cognitive and physical effort coupled with risks, which consisted of financial risks, social risks, and psychological risks. The overall cost spent in obtaining certain product and service is called transaction cost. Chircu & Mahajan (2005) divided transaction costs into three types – service price, time and psychological. Service price type costs included credit charged and transaction fees such as

commission and shipping. Time-type costs included the time spent in searching, waiting for response and delivery time. Psychological-type costs included perceived ease of use, inconvenience, and disappointment.

Previous research suggested perceived costs in electronic-commerce include ease of navigation, shopping time and monitoring (Chen & Dubinsky 2003; Teo & Yu, 2005). As the online auction is a form of electronic-commerce, these perceived costs are also relevant to this study. However, compared with other forms of electronic-commerce, an online auction web site has far more supplier for the same item. Each seller may have its starting price, payment terms, product details such as brand new or the age of the product. The effort to be spent in finding the right seller may reduce the perceived ease of use on the part of the potential buyer. This effort adds to the transaction cost of using online auctions.

It can be seen from the above that transaction costs consists of two parts – direct and indirect. The direct cost is the monetary cost involved in using the auctioning service. The indirect costs, which is the time and effort involved, can be explained using the constructs of bounded rationality and asset specificity in Transaction Cost Economics (Williamson, 1981).

In this research, the cost aspect of the value will be contained jointly by the Transaction Cost Economics (TCE) and the Technology Acceptance Model (TAM). In the TAM, cost will be considered under the construct of Perceived Ease of Use (PEOU). The TCE will be reviewed in section 4.2.

3.3.5 Risk

While the above discussions on benefits and costs cover the two major components of value, in electronic commerce, some additional dimensions are also considered as important components of value. Previous research confirmed risk is important determinant of consumer behaviour in electronic-commerce (Holt & Sherman, 2000; McKnight, 2002; Chen & Dubinsky, 2003; Olivero & Lunt, 2004; Forsythe & Shi, 2003).

The buyer faces two kinds of risks, namely, transactional risk and information asymmetry (Andrews & Benzing, 2007). Transactions risk refers to the seller's honesty and ability to deliver the product or service it promises. Information asymmetry is related to the quality of the product or service itself (See "Information Asymmetry"

under the heading “Transaction Cost Economics”) . The seller also faces some risks. The primary risk for the seller is the risk of the buyer not paying for the product or service (Andrews & Benzing, 2007).

In electronic commerce, there is also considerable evidence that users perceive significant risks and uncertainty in interacting with web-based vendors (McKnight, 2002; Forsythe & Shi, 2003). There are many reasons for these perceptions to exist. Many web-based vendors are unfamiliar to users. It is also more difficult for the consumer to assess the trustworthiness of e-vendors than brick-and-mortar vendors. Furthermore, the web user cannot inspect the product or directly observe the vendor for visual clues. Thus, consumers are often worried if a web-based vendor will deliver on its commitments or protect the privacy of personal information shared with the vendor (McKnight, 2002; Chang, 2007). As Dellarocas (2001, p.3) noted, “...the more the two sides of a transaction are separated in time and space, the greater the risks”. The Internet divides the parties in an online auction both in time and space to a very large extent. In this research, the dimension of risk will be contained in the Uncertainty construct of the TCE as shown in table 4.1. In section 4.3, the author will review the issues of risks in online auctions.

3.4 Service Quality

Ruyter et al. (1997) regarded service quality, together with product price, formed the logical dimension of customer value. Similarly, Petrick (2002) included emotional response, quality, and reputation as the perceived benefits of a product or service. Actually, according to Sweeney & Soutar (2001), perhaps the most common definition of value is ratio of trade-off between quality and price, which is a value-for-money conceptualization. Although this common definition of value as a ratio may be an over simplification (Chen & Dubinsky, 2003), it does highlight the importance of quality in determining the value of a product or service.

In electronic commerce, where the consumer has no face-to-face contact with the merchant, service quality is of particular importance in customer value. Keeney (1999) found that for consumers who shop on the Internet, they regard good service quality such as efficiency in searching for the product, delivery time, quick responsiveness to questions and after-sales service are important components of value, in addition to cost and product quality. For online auction web sites, service is their only offering. It

is critical for online auctioneers to understand what constitutes good quality for buyers and sellers.

Furthermore, there is empirical evidence that shows perceived risk and quality have important related roles in the perceived value of products and services, and therefore the willingness to purchase. Sweeney, Soutar, and Johnson (1999) investigated the relationship of perceived risk, service quality and perceived value in a retail setting using a sample of consumers actively looking for an electrical appliance. They empirically confirmed service quality could improve perceived value by reducing perceived risk. In electronic-commerce, the same relationship is confirmed by the findings of Chen & Dubinsky (2003).

In this research, the factors that affect perceived service quality of online auctions will be studied using E-S-QUAL and E-RecS-QUAL, both derived form of the SERVQUAL framework. Section 4.4 will review the background and limitations of the SERVQUAL and include recent adaptations of E-S-QUAL and E-RecS-QUAL to make it suitable for measuring service quality in electronic-commerce.

Chapter 4 - Literature Review : Technology Acceptance Model, Transaction Cost Economics, Service Quality

In this study, it is necessary to use a combination of frameworks because of the complex relationships among the components of value. Some dimensions of benefit may be explained using more than one theoretical framework. For example, the dimension of risk is considered by some scholars as a dimension of cost (Huber et al., 2001). Furthermore, there can be relationship between the dimensions of cost and quality. For example, in the transaction cost dimension, the time-cost has been considered as part of the quality dimension by some authors (Chircu & Mahajan, 2005; Keeney 1999). This study will use a combination of theories to explain the buyer's adoption of online auctions.

The theories used in this research will be the TAM, the TCE and SERVQUAL. In a study about antecedents of consumer satisfaction in online shopping, Devaraj et al. (2002) found that while the TCE explains the cost aspect, the Technology Acceptance Model (TAM) represents the benefit aspect, in addition to the cost aspect. Therefore, these two frameworks are actually complementary. Furthermore, based on Devaraj et al.'s (2002) work, Jones and Leonard (2007) found that the TAM, the TCE, and the SERVQUAL all have an impact on customer satisfaction in C2C e-commerce. Since this research about online auctions, which is a form of C2C e-commerce, the three frameworks will be adopted, with suitable modifications when necessary. The relationship between the dimensions of customer value and the constructs of these three theories are summarised in table 4.1.

The remainder of the literature review will examine theoretical underpinnings and previous studies related to the dimensions of customer value in online auctions. These dimensions are "Benefits", "Transaction Costs", "Risk", and "Service Quality". It will begin with the Theory of Reasoned Action (TRA) and its revised form, the Theory of Planned Behaviour (TPB). Then the Technology Acceptance Model (TAM) will be applied to explain, in particular, the acceptance of using Internet Technologies in online auctions.

Table 4.1: Relationship between the dimensions of customer value and the constructs of the TAM, TCE and SERVQUAL.

(Source: Compiled by the student for the thesis)

Theory	Construct	Factors	Dimensions of customer value
Technology Acceptance Model	Perceived Usefulness	Functional Benefits	Benefits
		Non-functional Benefits	
	Perceived Ease of Use	Time spent on using auctions (waiting for auction to close, waiting for shipping)	Cost
		Effort on using auctions (raising/answering questions, making arrangement for shipping)	
Transaction Cost Economics	Asset Specificity	User's own reputation	Risk
	Uncertainty	Product risk Financial risk Psychological risk Social risk Privacy risk	
SERVQUAL (Parasuraman et al., 2005)	E-S-QUAL	Efficiency Availability	Service Quality
	E-RecS-QUAL	Responsiveness Contact	

4.1 Technology Acceptance Model (TAM)

In the area of information technology, research was done to find out the variables that lead to the user acceptance of information technology that was made available to them. However, many researches indicate that in many cases, the proposed variables for acceptance do not correlate highly with users' utilization of the information technology (DeSanctis 1983). Moreover, in many cases, the measures had not been validated, but were used in research within computer suppliers such as IBM and Xerox (Davis, 1989).

To address the above said problem of poor correlation between acceptance and utilization, the technology acceptance model (TAM) was proposed by Davis(1986). The TAM is the most widely employed model for IT adoption (Brown 2009, Venkatesh & Bala, 2008). This part of the literature review will review the TAM (Davis, 1989) and its underpinning theories – the Theory of Reasoned Action (Fishbein & Ajzen 1975) and Theory of Planned Behaviour (Ajzen, 1991). The criticisms to the TRA, TPB and TAM will also be reviewed in the sections below.

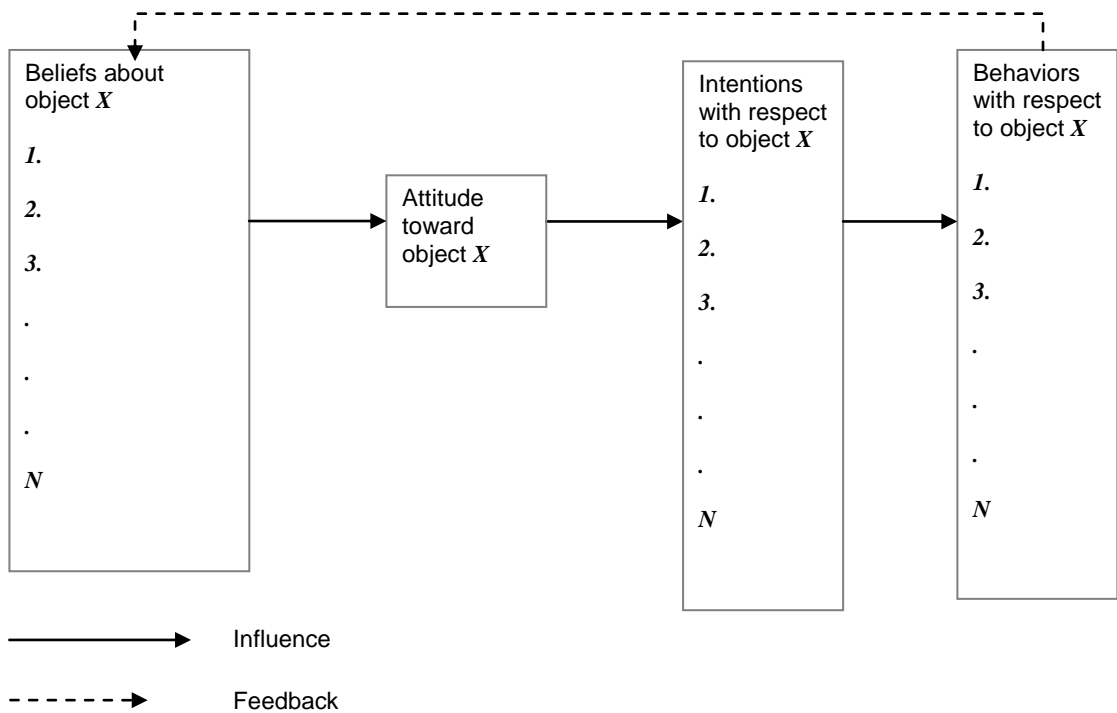
4.1.1 Theory of Reasoned Action (TRA)

There are a great number and variety of behaviours exhibited by people. These behaviours can range from political involvement (such as voting participation), to health habits (smoking or not), and to organisational behaviour (such as absenteeism or turnover). In the business world, there are also many kinds of behaviours performed by consumers. These behaviours range from buying (or not buying) a certain product, purchasing (or not purchasing) from a company, and to spreading good (or bad) word-of-mouth. In electronic-commerce, these behaviours range from choosing when to use the Internet or phone banking, to choosing which web site to purchase a product or service.

While each class of behaviours seem to require a different set of explanatory constructs, people actually approach different kinds of behaviours in much the same way (Fishbein & Ajzen, 2010). In each behavioural domain, the “same limited set of constructs can be applied to predict and understand any behaviour of interest” (Fishbein & Ajzen, 2010, p.2). This implies that in the domain of online auctions, the same limited set of constructs can be applied to predict how and why they choose to or not to use online auctions. This understanding can help online auctioneers to design better marketing strategies to attract more customers and improve their satisfaction.

The TRA explains the relations among beliefs, attitudes, behavioural intentions, and behaviours (Fishbein & Ajzen, 1975). Firstly, according to the TRA, a person’s behaviour is influenced by his/her behavioural intention. Secondly, behavioural intention itself is in turn affected by a person’s attitude towards an object or an action. Finally, the person’s attitude towards an object or an action is in turn affected by the person’s beliefs about that object or action. However, the performance of a particular behaviour may lead to new beliefs about the object, which may in turn influence the attitude. Figure 2.1 is a pictorial description of the TRA. Each of these four constructs in TRA is discussed below.

Figure 4.1 Conceptual framework relating beliefs, attitudes, intentions, and behaviours with respect to a given object (Fishbein & Ajzen, 1975, p.15)



Belief

Belief is defined as “the subjective probability of a relation between the object of the belief and some other object, value, concept or attribute” (Fishbein & Ajzen, 1975, p.131). According to TRA, the totality of a person’s beliefs forms the informational base that ultimately determines his attitudes, intentions and behaviours.

In online auctions, the object of the belief is the service provided by online auctioneers. An attribute of the online auction can be risk. Then one of the buyer’s beliefs regarding online auctions will be his or her subjective assessment of the risk of using online auction web sites. For example, a person may subjectively think that it is highly likely that online auction web sites are not safe. The belief in this case is formed by the person’s subjective rating of a high probability of a relation between online auction (the object in question) and risk (a concept). Beliefs are the foundations of the TRA.

Attitude

Attitude is defined as "a learned predisposition to respond in a consistently favourable or unfavourable manner with respect to a given object" (Fishbein & Ajzen, 1975, p.6). Attitude is learned as a result of past experience of performing behaviours. This is depicted by the effect of the dotted line representing the feedback as a result of the behaviours in

Figure 2.1. Initially, a consumer might have a favourable attitude towards online shopping. After an unpleasant shopping experience from an online merchant, say the goods was not delivered on time and did not match the description in the merchant's web site, the consumer would begin to belief that online shopping is not reliable. This belief will cause the consumer's attitude to change from favourable to unfavourable.

One of the attitudes affecting behavioural intentions in consumer behaviour is quality. For example, Olshavsky & Rosen (1985) explained that quality, as a form of overall evaluation of a product or service, is an attitude. This is consistent with Parasuraman et al. (1988)'s definition of perceived service quality as "global judgment, or attitude, relating to the superiority of the service" (p. 16). Furthermore, Cronin and Taylor (1992, p.64) provided empirical and literature support that quality should be measured as an attitude.

Another attitude that is relevant to this research is risk. Stone and Mason (1995) pointed out that risk an attitude that was has prominence in marketing research. The importance of risk as an attitude in an online shopping environment was confirmed by in the studies by Su (2006), Wu & Chang (2007) and Chang (2007). The inclusion of risk and quality in our research model was consistent with the TRA, which stated that behavioural intentions are affected by attitudes.

The relationship between belief and attitude is that each belief will lead to a favourable or unfavourable attitude. It is important to note in this definition that attitude should be measured on a bipolar scale (Fishbein & Ajzen, 1975, p.11). If a user believes that online auctions can save his or her time in searching for an item he or she wants, he or she will form a positive attitude towards online auctions. Conversely, if the user believes that online auctions cannot save his or her time in searching for an item he or she wants, he or she will form a negative attitude towards online auctions. Likewise, if a user believes that online auctions can find a lower product price for an item he or she wants, he or she will form a positive attitude towards online auctions. Conversely, if a user believes that online auctions cannot find a lower price for an item he or she wants, he or she will form a negative attitude towards online auctions.

Behavioural Intention

Behavioural intention is defined as "a person's subjective probability of intention to perform behaviour." (Fishbein & Ajzen, 1975, p.288) Many studies have supported the validity of using intentions to predict behaviour. Armitage & Conner (2001) did a

meta-analysis on 48 independent studies, which covered diversified behavioural domains. In these studies, the behaviour measures contained both self-reported behaviour measures, and objective (e.g. taken from records). They found that there is a significant correlation between behavioural intention and actual behaviour. Sheeran (2002) conducted a similar meta-analysis and also concluded a significant correlation between intention and behaviour. The predictive validity of intentions for behaviour is supported by reviews and meta-analyses of empirical findings.

Behaviour

Behaviour is defined as “observable acts that are studied in their own right” (Fishbein & Ajzen, 1975, p.13). In this study, the behaviour in question is the consumer's adoption or non-adoption using online auction as a channel to purchase products or services that he or she wants.

It may be argued that there may not be a perfect correlation between behavioural intention and actual behaviour. However, if the researcher wants to know whether or not a subject will perform a given behaviour, under volitional control, "the simplest and probably most efficient thing that one can do is to ask the individual whether he /she intends to perform that behaviour" (Fishbein & Ajzen, 1975, p.369). In the research related to technology adoption, Brown (2009) also pointed out that, as long as people have the control over their actions, the behaviour of adopting a technology is determined directly by the intention to use it, because people, in general, behave as they intend to. Since this research about individual consumers participating in online auctions and they are under volitional control, the best single predictor of an individual's usage of the online auction (the behaviour in question) will be a measure of his intention to perform that behaviour.

Behavioural Belief and Normative Belief

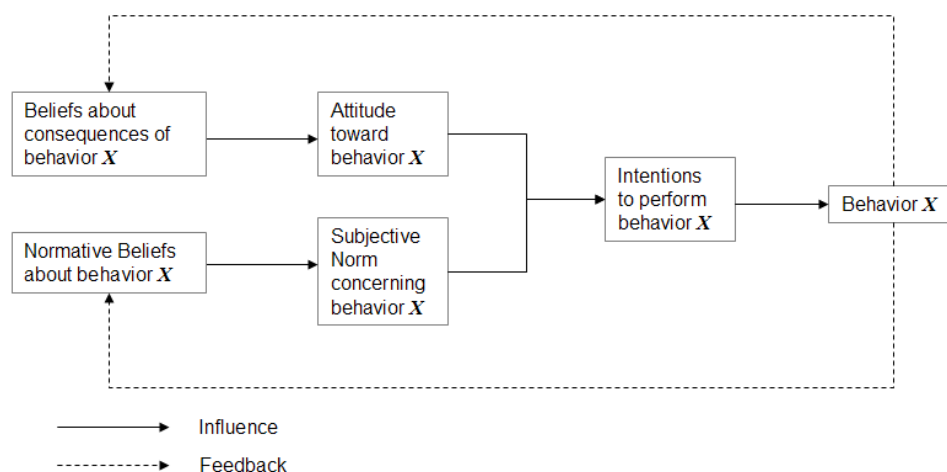
According to Fishbein & Ajzen (1975), there are two kinds of beliefs. One kind of beliefs is concerned with the behaviour itself. That is, these beliefs affect a person's attitude toward the behaviour because of the person's own evaluation of the consequences of performing that given behaviour. (Fishbein & Ajzen, 1975 p.16)

Another kind of belief is of a normative nature. That is, the beliefs that some other people think that the person should or should not perform the behaviour in question. The people whose opinions are considered by the person are called the referents. The

person may or may not be motivated to comply with any given referent. The normative beliefs and the motivation to comply lead to normative pressures. The overall result of such pressures is called "subjective norm". (Fishbein & Ajzen, 1975 p.16)

Both normative belief and subjective norm are major determinants of his/her intention to perform the behaviour. Hence, a person's behaviour intention can be seen as a function of two factors: his/her attitude towards the behaviour and his/her subjective norm. This is represented by figure 2.2.

Figure 4.2 Conceptual framework for prediction of specific intentions and behaviours (Fishbein & Ajzen, 1975)



In summary, the TRA is a comprehensive, general-purpose theory of volitional human behaviour. It explains the relations among beliefs, attitudes, behavioural intentions, and behaviours (Fishbein & Ajzen, 1975). Therefore, marketers can use the principles of the TRA to explain and predict consumers' purchase intentions and behaviours, thus helping the marketers to formulate better marketing strategies for their target consumers (Sheppard et al., 1988). The TRA has been used widely in the study of consumer behaviour. It was used in Petrovici and Paliwoda (2008) study of food choices in Romania. In e-commerce, it was used in Volk's (2001) study of Internet user behaviours in a five-stage consumer behaviour process. In mobile communications, it was used in Kim and Park (2009)'s study of US consumers' attitudes toward mobile commerce.

While the TRA can be used to explain behaviour by identifying what factors determine intentions to perform a behaviour, the actual behaviour may not always be performed for various reasons. Ajzen studied this discrepancy between behavioural intentions and actual behaviour and put forward the Theory of Planned Behavior (Ajzen, 1991). The TPB is reviewed below.

4.1.2 Theory of Planned Behaviour (TPB)

The TPB was a response to the criticisms of and the contradictions noted about the TRA. After the TRA was published, Ajzen (1991) noted that there was a contradiction between what people intended to do and what they actually did. Ajzen (1991) called this contradiction the Intention-Behaviour Gap. The similar observation was made independently by Linn (1965) & Sheeran (2002). Ajzen (1991) explained that individuals could only successfully carry out their intentions if they had sufficient volitional control over the behaviour. Ajzen (1991) defined a construct called Perceived Behavioural Control as a person's perception of the degree to which he or she is capable of performing a given behaviour. Conceptually, this definition is consistent with the construct of perceived self-efficacy used by Bandura (1986). In summary, Ajzen's (1991) Theory of Planned Behaviour (TPB) is actually a refinement to the TRA model in order to better predict both performance of behaviours and attainment of goals.

4.1.3 Criticisms on TRA and TPB

Although the TRA and TPB has 40 years of history of being applied in empirical studies, they face a number of criticisms. One of the criticisms was that the constructs in TRA and TPB were not sufficient to fully explain human beings' intention and actions (Conner & Armitage, 1998). To this criticism, Fishbein & Ajzen (2010, p.282) admitted that the TRA and TPB were meant to be parsimonious, and that the possibility of adding more constructs for predicting behavioural intention were explicitly left open.

Specifically, Fishbein & Ajzen (2010) pointed out that additional constructs should be added if it was possible to define and measure the proposed construct clearly. In fact, the TPB was developed along this principle by adding the construct of perceived behavioural control to the original TRA (Fishbein & Ajzen, 2010, p.282). Therefore, one of the objectives of this research is to find out if the constructs of risk and quality can be added to predict the behaviour of buyers in online auctions.

Another criticism was that the TRA and TPB models were too rational and deliberate, and as such, they fail to take into consideration emotions. For example, Gibbons et al. (1998) argued that not all behaviours were logical or rational. Reyna & Farley (2006) also criticised cognitive approaches such as the TRA and TPB are too rational, thus excluding actions that are spontaneous, reactive and impulsive. To this, Fishbein & Ajzen (2010) responded by quoting empirical support for the models in contexts that involve considerable risk and irrational behaviour such as exceeding the speed limit,

smoking cigarettes and unprotected sex. In this research, the factor of excitement will be studied as one possible determinants of adoption of online auctions.

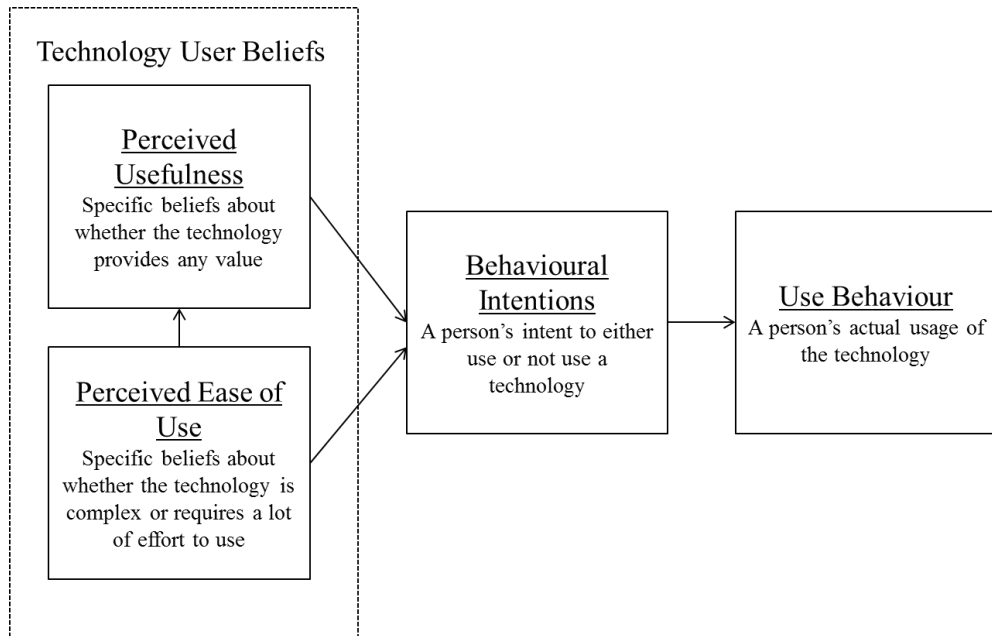
While the TRA and TPB provided a foundation for understanding and explaining human behaviour in general, they should be adapted with additional constructs to fit the context of the research in particular (Fishbein & Ajzen, 2010, p.282). The Technology Acceptance Model (TAM) is one such adaptation of the TRA and TPB to explain the human behaviour in the acceptance of technologies. As the online auction involves the use of Internet technologies, this research will adopt the TAM as one of the underpinning theories.

4.1.4 Technology Acceptance Model (TAM)

Based on the TRA and the TPB, the TAM proposes that the use of technology is determined by an individual's attitude towards using the technology, which is a function of their two beliefs. One belief is about their ability to use the technology, and the other belief is an evaluation of the value of actually using it (Brown, 2009).

Those two beliefs, mentioned above, are called Perceived Usefulness (PU) and Perceived ease (PEOU) of use respectively. They are the key predictors of actual behaviour in adopting a technology-based product or service (Venkatesh & Bala 2008, p.275). PU is defined as "the degree to which a person believes that using a particular system would enhance his or her job performance" (Davis 1986 p.82, Davis 1989, p.320). PEOU is defined as "the degree to which a person believes that using a particular system would be free of effort" (Davis 1986 p.82, Davis 1989, p.320). The PU of an object is equivalent to the functional benefits provided by that object (Kim, Chan, and Gupta, 2007).

Figure 4.3 Technology Acceptance Model (Davis 1989)



Davis (1989) developed validated constructs for measuring perceived usefulness and perceived ease of use in a multi-stage manner. Using a two-staged approach, it was found that both Perceived usefulness and Perceived ease of use are significantly correlated with self-reported indicants of use. Since its introduction in 1989, the TAM has been adopted to investigate and explaining user behaviours in technology acceptance. Table 4.5 is a summary of some of the recent research done based on the TAM model.

4.1.5 Suitability of TAM for e-Commerce

The suitability of TAM for electronic-commerce has been challenged by some scholars (Kim, Chan, and Gupta, 2007). The main rationale for the challenges is that the TAM was initially developed for studying employee's adoption of Management Information Systems (MIS), not about individual consumers engaged in B2C or C2C e-commerce, such as online auctions. This section will review these challenges and how empirical studies addressed them.

Based on the methodology used in the development of the TAM, there are two scepticisms regarding the use of the TAM in e-commerce (Kim, Chan, and Gupta, 2007). Firstly, while the results could be a true reflection of the subjects' acceptance of the technology being tested, the results could not indicate the subjects' willingness to choose that technology over others when they were not in an organisation. Secondly, there were not costs involved from the subjects because they were performing tests in a

laboratory-like environment or the subjects were asked to use technologies which were provided to them by the organisation they were working in. This is different from subjects who actually have to give efforts in terms of time and money when doing real-life e-commerce transactions over the Internet with parties they have never met before. It may be argued that the TAM is only valid for the behaviour of users in an organisational context. It may not be suitable for studying “modern” systems such as online auctions conducted over the Internet.

However, there is evidence that TAM-based research is also very useful in predicting user behaviour beyond its original scope in an organisational setting. For example, the work Agarwal & Karahanna (2000) showed the TAM can be applied to explain the acceptance of technology non-organizational settings. In the electronic-commerce area, many studies have provided empirical support for the TAM in applications related to the Internet (Chen et al., 2002; Moon and Kim, 2001; Venkatesh & Davis 2000). In particular, the TAM has been successfully applied in the area of Internet Banking (Wang and Tang 2004, Chan and Lu 2004, Kolodinsky et al.,2004). Furthermore, there are studies which show that the TAM is a reliable model of technology acceptance behaviours in information technology across levels of expertise (Taylor and Todd 1995), and across countries (e.g., Rose & Straub 1998; Straub et al., 1997). Table 4.2 summarises some previous research done related to the TAM and e-commerce. As the table shows, there has been no previous research done using the TAM in the online auction area in Hong Kong.

Since the online auction is based on information technology, the user must be both technology savvy and willing to adopt telecommunications technology before they will consider using online auctions. It is reasonable to use the TAM in this research about that the adoption of online auction by.

Table 4.2 Previous research done related to the TAM and e-commerce.
(Source: Compiled by the student for the thesis)

Author(s)	Additional Constructs to TAM	Application	Country
Broekhuizen and Huizingh 2009	Product quality, Service quality, Price, Time/effort saving, Risk, Enjoyment	Car Insurance Comparison Web Site	Holland
Chan and Lu. 2004	Computer Self-Efficacy	Internet Banking	Hong Kong
Cheng and Lam, 2006	Perceived Web Security	Internet Banking	Hong Kong
Gefen et al. 2003	Trust	Online Shopping	United States
Jones and Leonard. 2007	Uncertainty, Asset Specificity, Time, Service quality	-	United States
Sullivan and Walstrom 2001	Service quality	Online Book Stores	United States
Wansel 2010	-	Search Engine Adoption	United States
Yousif 2010	-	Network Virtualization Technology	United States
Yiu et al. 2007	Risk, Personal Innovativeness	Internet Banking	Hong Kong

4.1.6 Criticisms on the TAM

The TAM has been criticized for not including some important factors that may affect behaviour intentions (Brown, 2009; Purkayastha, 2009; Venkatesh & Bala 2008). One particular criticism is that TAM has no construct which represents an overall estimation of the adoption object. It explains adoption behaviour only with two factors: usefulness and ease of use. There is no construct to represent the sacrifice aspect which is an important part of the customer's perceived value (Kim, Chan, and Gupta, 2007). Therefore, prior research which employed the TAM has included some additional constructs. For example, when investigating consumer behaviour related to internet banking, Chan and Lu (2004) included computer self-efficacy; Cheng and Lam (2006) included perceived web security; Yiu et al. (2007) included Perceived risk and Personal Innovativeness. Likewise, Gefen et al. (2003) integrated trust in the TAM in a study about online shopping. Therefore, this research will include perceived risk as a possible determinant in the behavioural intentions concerning online auctions.

Another criticism on the TAM is that it is limited in scope because it only focuses on the behavioural intentions of the user of technology at a certain point. It does not include aspects such as post-purchase behaviour. One of the important post-purchase behaviour is whether the user is going to recommend the service to other people or not (Brown 2009, Purkayastha 2009). In this research, this aspect of the post-purchase behaviour relates to the reputation rating of the trading partner, which is related Asset Specificity as stated in the TCE section.

Agarwal & Prasad (1999) criticized TAM for its lack of acknowledgement of individual differences. They claimed that beliefs and attitudes about technology are influenced by more than the perceived ease of use and perceived usefulness of the product. The original TAM does not take into account prior experience, age, gender, and many other characteristics that may influence attitudes about technology, which in turn influence intention to use an innovation. To this, Venkatesh (2000) admitted that individual differences such as gender, age and experience are moderating factors for intention. In this research, the moderating effects of these individual characteristics will be studied as well.

4.1.7 Excitement

One of the criticisms of the TRA and TPB is that they did not consider the non-rational human behaviours. For example, Gibbons et al. (1998) argued that not all behaviours are logical or rational. Also, Reyna & Farley (2006) criticised cognitive approaches such as the TRA and TPB are too rational, thus some actions that are spontaneous, reactive and impulsive are not excluded. This criticism is of particular relevance to this research because of the competitive and gambling-like nature in the bidding process of online auctions.

Theory of Cognitive Dissonance

There are theories stating that human beings do not always act rationally – the Theory of Cognitive dissonance and the Attribution theory are two of them. The Theory of Cognitive Dissonance was proposed by Festinger (1957). Cognitive dissonance is a discomfort felt by a person when the person holds conflicting cognitions (e.g., ideas, beliefs, values, emotional reactions) simultaneously. Since dissonance is unpleasant, the person will try to reduce it. The Theory of Cognitive Dissonance states a person can reduce dissonance by finding a way to change one of the cognitions to make them more

consonant with the other cognitions. This means that a person may change his or her beliefs (one cognition) towards an object to match the perceived value (another cognition) of the object. A smoker's refusal to give up smoking is an example of changing one's beliefs to match one's perceived value. The smoker may know that smoking is unhealthy, but the person keeps on smoking because of the person perceives a high value in smoking. In this case, that person may reduce dissonance by changing his or her cognitions about smoking. The person may believe that his or her chance of actually suffer from the harmful effects of smoking is extremely low. Alternatively, that person may add the belief that the short-term enjoyment of smoking is worth the risk of long-term harmful effects (Aronson, 1997).

Attribution Theory

The Attribution Theory is a collection of theories that are concerned with describing how individuals explain their own and others' behaviours (Settle and Golden, 1974; Jones, 1976). In researches regarding consumer behaviour using the attribution theory, Weiner(1986)'s theory is one of the most frequently used theories (Hartel, McColl-Kennedy & McDonald, 1998). According to Weiner's (1986) theory, the effects of one's attribution judgments are determined by three dimensions, namely, locus, controllability, and stability (Weiner, 1986). Locus is defined as the degree to which the behaviour or event is judged to be a reflection of characteristics of the target (e.g., ability, effort) versus characteristics of the target's situation (Weiner, 1986). When a person attributes the result of an event or behaviour to his own abilities, it would be a causal attribution of internal locus. If that person attributes the event or behaviour to a demanding boss, the causal attribution would be of external locus. Controllability is defined as the degree to which the behaviour or event is judged to be under the volition of the target (Weiner, 1986). When a person attributed his or her poor performance to effort, it would be considered to be a controllable cause. On the contrary, if that person attributes poor performance to ability level, it would be considered to be an uncontrollable (Weiner, 1986). Stability, is the degree to which the behaviour or event is judged to be immutable versus changing over time. When a person attributes an event or behaviour to luck, the event or behaviour is considered to have an unstable cause. If the person attributes the event or behaviour to the cultural background of the people involved, it is considered to have a stable cause (Hartel, McColl-Kennedy, & McDonald, L. 1998). According to Weiner's (1986) theory, the judgments about these three causal dimensions collectively generate emotions and attitudes toward the target. These

feelings and attitudes in turn direct the behaviours of the perceiver . For individuals making behavioural attributions about themselves, the situation and external environment are entirely salient, but their own body and behaviour are less so. This leads to the tendency to make an external attribution in regards to their behaviour (Huffman, Vernoy & Vernoy, 2000).

Based on the discussions regarding the theories of cognitive dissonance and attribution, it can be seen excitement in auctions, which is not a rational, but affective factor and not entirely salient to the user, has an impact on their behaviour. It is necessary to include the element of excitement in this research.

The auction is different from other forms of selling in that the product price is dynamic and there is a high level of excitement because there are other bidders who are interested in the same item. The effect of the presence of other bidders was called the “opponent-effect” (Heyman et al., 2004). In addition, the buyer must make decisions under a time pressure because the highest bid will win when the auction closes. As a result, the buyer may develop a sense of competition and an intense desire to win. (Häubl and Leszczyc. 2004). All these external conditions create the emotional stimuli for the buyer. The thrill-seeking consumer is likely to make aggressive biddings. (Möllenberg, 2004)

Wolfenbarger (2001) conducted a research using online and offline focus groups and found that online auctions is one of the three reasons experiential consumers browse online. In the research, it was found that the experiential benefits of online auctions include the frequent change of products, products being unusual, unique or collectible, and the element of excitement (Wolfenbarger, 2001, p.47). This is consistent with the research by Babin et al. (1994), in which a scale for measuring hedonic and utilitarian shopping value was developed and validated. In the scale, there were items such as “the shopping trip felt like an escape” and “I felt a sense of adventure” (Babin et al. , 1994, p.651)

The issue of winner's curse was studied in much previous research (Kagel, et al. 1993; Kjell et al. 2002; Ezra et al. 2002; Heyman et al., 2004; Araujo & Castro 2009). But these research focus mainly on the strategy of bidding, how to avoid over-paying on the part of the buyer, and how to maximize revenue on the part of the seller. There is a lack of study of the role of excitement as an emotional benefit in adopting online auction. In

this research, excitement is included as one of the possible factors affecting the Internet user's adoption of online auctions.

After reviewing the theories relating to "Benefits", the first dimension of customer value in this research, the following section will review the theory of Transaction Cost Economics (TCE), which is the underpinning theory for transaction cost, the second dimension of customer value in this research.

4.2 Transaction Cost Economics (TCE)

Transaction Cost Economics is theoretically explains why a transaction subject favors a particular form of transaction over others. The basic principle of TCE is that people like to conduct transactions in the most economic way (Teo and Yu (2005, p.452). Williamson (1981, p.552) defined transaction as a process by which "transaction occurs when a good or service is transferred across a tech- nologically separable interface". In the case of online auctions, the transaction is the process by which a bidder gets a product or service from a seller via an online auction platform. In this research, the transaction subject is the buyer or seller in an online auction.

It should be noted that the TCE's original framework "poses the governance question as a discrete choice between market exchange and internal organisation" (Rindfleisch & Heide, 1997). However, it has been applied in many domains such as vertical integration, contract typology, and collaboration of buyer-seller relationship (Teo and Yu, 2005). In the area of e-commerce, TCE has been applied to explain many issues at the firm or individual level, such as development of Web strategy, strategic alliance structuring (Parkhe 1993), and the acquisition decision of consumers (Benjamin and Wigand 1995; Liang & Huang 1998).

In TCE, the basic principle is that the transaction subject will prefer one form of transaction over the others if that particular form of transaction is the most economic way of conducting that transaction (Teo and Yu, 2005). For the buyer in an online auction, there are many other forms of doing the transaction. The buyer can purchase the item from a conventional brick-and-mortar store such as Walmart, or from an online store such as Amazon, or more recently, using a group purchase web sites such as Ubuyibuy.com or Groupbuy.com. The buyer will only adopt online auctions when he / she considers that this can minimise his / her overall costs in obtaining the product or service.

The TCE is based on two major assumptions – bounded rationality and opportunism; and focused on three dimensions – transaction uncertainty, asset specificity and frequency (Yang and Peterson, 2004; Teo and Yu, 2005). These are discussed in turn below.

4.2.1 Bounded rationality

Bounded rationality is defined as "the limited memories and limited cognitive processing power" people have (Teo and Yu, 2005). It means that in making decisions, people cannot completely digest all the information they have in order to predict the consequences of all their possibilities based on the information. Due to the limited memories and cognitive processing power the buyer has, it is not possible for him or her to accurately consider all alternative courses of action. Hence, it is extremely difficult, if not impossible, for the buyer to reach an optimal decision.

One of the characteristics of online auctions is that there is a greater choice of items, either new or used, and sellers. The information available to the buyer may include item descriptions given by various sellers on different auction web sites, the number of bidders and their possible reactions when the buyer places a bid, the price and availability of the item in other channels such as brick-and-mortar stores, the reputation of the sellers, the guarantees provided by the auction web sites and so on.

4.2.2 Opportunism

Opportunism refers to the possibility that people will act in their own self-interest (Williamson, 1981). It means that some people may be unscrupulous at times, or they try to make use of special situations that give them the chance to make the most off another party in a transaction.

In online auctions, the seller can try to hide some unfavourable facts about the item he/she is selling so that the buyer ends up paying more than what the item's actual worth. Since the buyer and seller have not contractual binding and the relationship between them is only temporary, either party is more likely to take opportunistic actions in order to maximize short-term gains. Furthermore, either party can choose to use fake identity to defeat the user rating system.

While the above assumptions can be applied to online auctions, there is a need to examine the dimensions in the TCE to see if they are suitable for this research related to

online auctions. Hence, there is a need to review if the dimensions in TCE can be applied to the characteristics of the transaction in online auctions. There are three dimensions in the TCE – transaction uncertainty, asset specificity and frequency (Yang and Peterson, 2004; Teo and Yu, 2005). These dimensions will be reviewed below.

4.2.3 Frequency

The effect of frequency on transaction cost on organisations is very strong. If a firm only uses a good or service very occasionally, it relatively high cost of having “in-house” provisions of that good or service cannot be justified. In the TCE, this variable deals mainly with the "build-or-buy" decision of a firm, but not for individual consumers. Therefore, it is not surprising to find that some researchers have omitted the frequency variable in their research related to e-commerce. For example, Liang & Huang (1998) omitted frequency as a variable in their study on consumer acceptance of products in e-commerce when using the TCE as a basis. Likewise, Lee, Kim & Moon (2000) omitted frequency as a construct in their study on the key design factors for customer loyalty on the Internet. Since this research is about individual buyers, whose frequencies for using online auctions cannot be reasonably predicted, the variable of frequency is not applicable in this research.

4.2.4 Uncertainty

According to Liang & Huang (1998 p.32), uncertainty refers to the cost associated with the unexpected outcome and asymmetry of information. This is agreed to by Teo and Yu (2005 p.453) as they stated that uncertainty can be a problem to the parties of a transaction because of bounded rationality, information asymmetries and the danger of opportunism. It is always difficult to predict eventualities that may happen during the course of a transaction. For example, there is uncertainty in the transaction when one cannot be sure that the other party will not go out of business or try to renegotiate the contract at some future time during the life of the contract. The length of time over which the transaction will happen becomes crucial (Williamson, 1981). For transactions like those when the buyer buys a brand new items in a brick-and-mortar shop, uncertainty is much less relevant. It is because the duration is very short and the buyer can inspect the product or even touch it and try because purchasing it. Furthermore, the eventuality of theft of credit card information is eliminated if the payment is in cash.

In online auctions, the transaction starts when the buyer placed a bid for an item that he/she wants. During the transaction, other buyers may out bid the buyer before the auction ends or the seller can cancel the auction altogether. The transaction ends only when the item is delivered to the buyer, via the mail or face-to-face, and the buyer pays the seller in full. The uncertainties involved are that the buyer may not win the item, or the seller does not deliver the item in time, or the item's quality does not match the description. In summary, the variable of uncertainty is applicable in this research. In this research, uncertainty has a broader scope than in TCE. It is because in online auctions, the user may perceive other uncertainties such as privacy and the opinion of friends and families about the use of online auctions. So uncertainty will be considered under the construct of perceived risk in Section 4.3.

4.2.5 Asset specificity

Asset specificity means the lack of ease with which the human capital (employees), physical assets, and facilities specifically tied to the manufacturing of an item can be used by alternative users or put to alternative uses (Williamson, 1981). The TCE states that transaction cost increases as transactors make greater asset-specific investments. When asset specificity increases, due to fear of opportunism and information asymmetry, the transactor has to set up complex governance structures (i.e., more complicated contracts) to safeguard the value of the asset against the other party from taking opportunistic actions. Thus, an increase in asset specificity will result in an increase in transaction costs (Teo and Yu, 2005). However, some researchers omitted asset specificity from their work. The rationale is that while an organisation has to set up complex governance structures to safeguard itself, the individual consumer in an online auction does not need such a governance structure (Teo and Yu, 2005).

In online auctions, the most specific investments such as personalized accounts, services and payment security software, are provided freely to consumers by online stores. The buyer is only charged when he / she completes transactions.

For internet users, there are two kinds of asset specificity - physical asset specificity and human asset specificity (Teo and Yu, 2005, Mithas et al., 2008). Physical asset specificity refers to the equipment to access an online auction web site. The equipment can be a computer or other devices (such as a mobile phone) to connect consumers to the Internet. Teo and Yu (2005) reasoned that the computer, or any other device such as the mobile phone, that connects the buyer to the Internet should not be considered as

specific asset generally, since they can be used for other purposes. The online user can use the computer browsing other web sites, word-processing, photo or video editing or watching a DVD.

According to Teo and Yu (2005), human asset specificity can be “any special human expertise needed in online shopping”. It can be argued that the with the increasing use of the Internet for various purposes such as social networking, information search and online shopping, the skills and knowledge that the buyer developed for online auctions can be used for other activities on the Internet, such as browsing and searching. Hence, it follows that physical asset specificity and human asset specificity are not some specific investments that the buyer makes for online auctions only.

Besides human and physical asset specificities, it has been found that the brand name specificity should also be considered (Yen et al. 2009). In online retailing, the relationship between the vendor’s reputation and the perceived quality of products has been confirmed by Chen & Dubinsky (2003). In online auctions, it has been found that buyers will consider the seller’s rating before engaging in a transaction (Nel et al. 2010). This is because positive seller ratings and reviews can lower the perceived risk of inaccurate product descriptions and any other perceived risk in the service from the seller to the winning bidder once the auction has closed. In order to protect its “brand name” as a value asset, the seller is less likely to take opportunistic actions. This is consistent with the finding by McDonald & Slawson (2002). They found that sellers who have higher reputation enjoyed higher auction prices. The buyer may believe that the seller reputation value outweighs the value of taking advantage of the buyer in the current transaction.

Also, some sellers limit the ratings of buyers that can bid their items. It is possible that buyers have to behave nicely such as keeping their promise to finish the transaction after winning a bid, and to rate the seller favourably after completing a transaction with the seller. It is necessary to find out if online users will restrain from opportunistic behaviour in order to maintain their brand name specificity in the form of reputation rating.

4.3 Risks

After reviewing the theories relating to "Benefits", and “Transaction Costs”, which are the first and second dimensions of customer value in this research, the following

sections will review the literature regarding “Risk”, which is the third dimension of customer value in this research.

4.3.1 Importance of Perceived Risk in E-commerce

There is considerable research on different shopping channels indicating that risk has been always a concern for the consumer when there is no face-to-face proximity. For example, Cox and Rich (1967) studied telephone shopping and found that two-thirds of the shoppers avoided telephone shopping because of the perceived risk that they may not get what they expected. The same perception about telephone shopping was confirmed in the study by Akaah and Korgaonkar, 1988). Spence, Engel & Blackwell (1970)'s study on mail ordering produced the same consistent conclusion. In later studies related to the Internet, such as Herbig & Hale (1997)'s, it was found that in addition to not getting what they expected, shoppers were also concerned about "privacy". Privacy can be defined as “the ability of the individual to protect information about oneself” (Goldberg et al., 1997, p.6). The information that needs to be protect includes one’s address and credit card information (Featherman and Pavlou, 2003). Actually, there is also empirical evidence that when purchasing is involved, consumers perceive the Internet to have a higher level of risk than traditional retail formats (Tan, 1999; Lee & Tan, 2003; Forsythe & Shi, 2003). Some research has shown that the buyers’ inclination to participate in online marketplaces is reduced if they perceive high risk when doing transaction on the Internet (Pavlou 2002; Pavlou & Gefen 2004; Yeh and Li, 2009; Kwek et al. 2011).

Research has shown that the incidence of online fraud was twenty times greater than offline fraud (Charki, Josserand And Charki, 2011). Furthermore, it has been reported that frauds related to online auctions accounted for 45% of all e-commerce fraud-related complaints, more than any other e-commerce activities (Valacich & Schneider, 2010). For online auctions, Adams (2007) pointed out that there are problems in an open market like eBay. There are sellers who overly hype poor or defective merchandise. Some sellers will try to hide or overcharge shipping. Some sellers will try to cut corners on packing materials. Therefore, the online auctioneers must understand the consumers’ perception of different kinds of risks involved in using online auctions.

4.3.2 Definitions for Risk and Perceived Risk

Davis and Olson (1985) defined risk as a situation where a decision-maker has a priori knowledge of the adverse consequences and the occurrence probability. Sweeney et al. (1999) regarded risk as a potential sacrifice, and when consumers buy products, they are actually gambling that they don't have to make the sacrifice. A review these definitions shows that there are two common basic elements – Uncertainty (occurrence probability, potential) and Loss (adverse consequences, sacrifice). As the following discussions show, these two elements are also central to the construct of perceived risk.

When consumers make decisions that are complex and important, each step of the decision-making process can be viewed as an information processing, uncertainty-reducing exercise. Bauer (1960) claimed that consumer behaviour involves risk in the sense that the consumer's every action would produce consequences which the consumer could not forecast with anything approximating certainty. Furthermore, Bauer (1960) pointed out that some of these consequences were likely to be unpleasant. Similarly, Bettman (1979) found that in a purchase decision that is complex and where the consequences are not fully known, the consumer's perceived risk and risk-reducing strategies may affect the consumption or adoption decisions. There is also empirical evidence that risks in online transactions critically affect adoption of online services (Antony et al., 2006).

Bauer (1960) made an important contribution by stating the importance of focusing attention on consumer's perception risk of risk rather than what he called "real-world" risk. He theorised that perceived risk is a subjective evaluation by an individual, which may or may not reflect actual conditions in the real-world. Bauer (1960) further reasoned that read-world risks are often not considered by consumers, and therefore do not affect consumer decisions. He postulated that consumers are risk averse, which means consumers will try to make purchase decisions that limit their exposure to risk.

Perceived risk as a construct has been studied in considerable research related to both traditional and online shopping. Perceived risk can be defined as in terms of feelings of uncertainty and possible adverse consequences about some future event (Bauer, 1960; Cunningham, 1967). Sweeney et al. (1999) defined perceived risk as the subjective expectation of a loss. Jacoby & Kaplan (1972) defined perceived risk is a function of uncertainty regarding the consequences of a decision. The basic concept of perceived risk has not changed much since then. For example, Featherman and Pavlou (2003) defined perceived risk as "the subjective belief of suffering a loss in pursuit of a desired outcome". The same basic concept of perceived risk is also used in studies related to e-

commerce. For example, Chan and Lu (2004) defined perceived risk as the uncertainty that customer face when they cannot foresee the consequences of their decisions. Chen & Dubinsky (2003) defined perceived risk as the purchaser's awareness of the uncertainty and following unfavourable results of purchasing a product or service. In his study of factors affecting the adoption of online banking, Lee (2009) defined perceived risk in online banking as the subjectively determined expectation of loss by an online bank user in contemplating a particular online transaction. The importance of perceived risk is that it is a proxy for the objective, real-world risk, and it becomes the basis for the customer's decisions and choices (Weber and Milliman, 1997).

In the definitions above, there is a common element of "loss", regardless of being named "unfavourable results", or "adverse consequences", or just "consequences". According to the type of "loss", authors have classified perceived risks into different types. The following section will review the different types of perceived risks studies studied by various authors.

4.3.3 Types of Perceived Risk

It is important to note that besides the loss of money for buying the wrong product or service; or buying the right product or service for too high a price, there are other forms of loss that the consumer may suffer. For example, Taylor (1974) pointed out that the psychological aspect is a major aspect in the consumer decision making process. The consumer may suffer from anxiety, frustration, and down time along with tangible financial and performance losses. Although different authors used different terms to classified perceived risk, it can be summarised into five types. These different types of risks are reviewed below.

Product Risk

Product risk involves the loss that the product purchased may malfunction and may not function as it was designed or originally expected. As a result, the product failed to meet the desired benefits of the consumer (Jacoby and Kaplan, 1972; Kim and Lennon, 2006). Some other authors refer to this risk as Performance Risk (Cunningham, 1967; Taylor, 1974; Kaplan et al., 1974).

Product risk may be higher in the online auction context because of information asymmetry, mainly because the buyer cannot physically examine the product before purchase (Chen & Dubinsky, 2003).

It is possible that, given the possibility of getting a lower product price, the buyer may have already taken into account the possibility of the product not fully meeting the buyer's requirements. It is necessary to find out how the perception of product risk may affect the buyer's decision to use online auctions.

Financial risk

Financial risk is the possible financial loss due to fraud or overspending. The loss involved is not just monetary cost associated with the product price, but also the following maintenance cost if the product needs frequent repair (Jacoby and Kaplan, 1972). Roselius (1971) refer to this risk as Money Risk.

To many online consumers, the main financial concern is credit card fraud (Luhmann, 1988). Some web sites allow the users to register their credit card information only once using, for example, the PayPal service. Then the user does not have to submit his or her credit information every time he or she buys something or pays for the service charge (Chaffey et al., 2009). Other web sites, for example, hk.yahoo.com, allows user to make payments using Internet Banking or offline payment at convenience stores like 7-eleven. In an online auction context, financial risk also includes the potential for monetary loss due to paying too high a product price for an item bought in an online auction, or paying for expenses (for example, repair) related to the use of a product bought in an online auction (Lee, 2009, p.2). It is necessary to find out how the perceived financial risk may affect the buyer's decision to use online auctions.

Psychological risk

Psychological Risk refers to the potential loss of self-respect due to the frustration of not achieving a buying goal. It can also refer to the negative effect on a consumer's tranquility or satisfaction that might be caused by a defective product (Jacoby and Kaplan, 1972). Roselius (1971) refer to this risk as Ego Risk. Taylor (1974) used the term Psychic Costs, which included Anxiety & Frustration, to describe this risk.

In online auctions, psychological risk may occur because the buyer may try to win a bid because of the bidding frenzy created by the competition from the other bidders (Holt & Sherman 1994). After winning the bid, the buyer may regret having bought a product that does not match the buying goals. For example, the buyer may find out that the item is not really necessary. On the other hand, if a bidder failed to win the bid for an item, the buyer may regret the decision of not using the normal electronic-commerce, such as

shopping from a business-to-consumer web site. The bidder may regret the decision of not using an alternate channel such as a brick-and-mortar store, or an online retailer such as Tesco.com or Walmart.com, where the buyer can buy the item at a fixed price.

The psychological risk is related to, but can be independent from, financial risk. It is because the amount of money involved may be small, but the buyer just regrets the bidding decision he or she has made. It is necessary to find out how the perceived psychological risk may affect the buyer's decision to use online auctions

Social risk

Social risk refers to the loss of social status because the product purchased by a buyer may result in disapproval by the buyer's friends, family or colleagues (Jacoby and Kaplan, 1972). The same risk may stem from the disapproval of using internet as a shopping channel. The study by Camarero (2011) found that shopping using the Internet can cause social risk, but the degree of the risk can vary across nations. Usually, consumers try to obtain advice or consent from others in their social group in order to reduce social risk.

In the context online auctions, social risk refers to the possibility that using online auction may result in disapproval of one's friends, colleagues or family members. It is possible that one's social standing may be enhanced or diminished depending on how online auction is viewed. There is the possibility that the online auction is viewed as the channel for clearing used and out-of-season items. As a result, the buyer who buys from online auctions may suffer a loss of social status. This is related to the concept of normative belief (Fishbein and Ajzen, 2010) in the section about "Theory of Reasoned Action". It is necessary to find out how the perceived social risk may affect the buyer's decision to use online auctions. For example, the buyer may choose not to boast the fact that they manage to get a bargain from an online auction to avoid the social risk.

Privacy risk

Compared with the other types of risks mentioned above, privacy risk is a relatively new kind of risk (Crisp, Jarvenpaa, & Todd, 2003; Forsythe & Shi, 2003; Miyazaki & Fernandez, 2001; Lee, 2009; Almousa, 2011). Privacy risk refers to the potential loss of control over personal information (Featherman and Pavlou, 2003; Almousa, 2011). If consumers may feel less control over their personal information, they will be hesitant to

provide such information required to make an online transaction (Drennan, Mort, and Previte, 2006).

In online auction web sites such as eBay or Yahoo, before users can buy or sell items on online auction web sites, they must register as a user first. As part of the registration procedure, they must provide some information about themselves. The basic registration information includes their full name, phone number, email addresses, street address, and the date of birth (eBay.com, Yahoo.com.hk). In order to use more advanced features and to gain the trust of other online auction users, the user can optionally selected to be provide more information such as credit card. In the auction site of hk.yahoo.com, the user's name will be accompanied by a special credit card icon to indicate that the user's credit card has been validated. The purpose is to increase the trust of the other users when dealing with this user. While this can be seen as a good service feature, the user may worry about his or her privacy being compromised if the online auctioneer does not safeguard his or her privacy adequately.

Historically, the Internet was originally designed to maximize the flow of information and data can travel in multiple paths in case some paths become unavailable (Chaffey et al., 2009). However, this resilient design also means hackers may eavesdrop and obtain the personal information when they are being transmitted on the Internet.

By understanding the types of perceived risks that are considered important by the users, the online auctioneers consider ways to attract risk-averse consumers.

4.4 Service Quality

4.4.1 Definitions of Service

The concept of service has been defined in different ways. Before the wide-spread use of communications technology, the definition of service often involve only human-beings and some interactions or processes between the people are involved. For example, Hill (1977, p. 318) defined service as “a change in the condition of a person, or a good belonging to some economic unit, which is brought about as a result of the activity of some other economic unit, with the prior agreement of the former person or economic unit”. Besides the human aspect, this definition mentioned the process nature of services. Since the widespread use of communications technology, such as the Internet, definitions for service has changed into reflect the importance of the role of systems, in addition to the humans, in the delivery of service. For example, the definition of service given by Gronroos (2000) is “an activity or series of activities of a more or less intangible nature that normally, but not necessarily, take place in the interaction between the customer and service employees and/or physical resources or goods and/or systems of the service provider, which are provided as solutions to customer problems”.

By comparing these two definitions above, it can be seen that while Gronroos (2000) made the same emphasis on process nature of service, he also brought into picture the systems involved in the delivery of service. In this research, the systems involved would be the hardware and software used by the online auctioneer. Another important aspect of this definition is that the outcome of service is more than just “a change in the condition”, rather, it should be “solutions to customer problems”.

Vargo and Lusch (2004, p.2) gave a similar definition for service but with a wider scope. Their definition for service was “the application of specialized competences (knowledge and skills) through deeds, processes, and performances for the benefit of another entity or the entity itself”. The significance of Vargo and Lusch (2004)’s definition is that it implies that the “entity” providing the service must have high level of competences in order to provide high level of service. Moreover, Vargo and Lusch (2004) emphasized the capabilities of the service provider so that the service is not just for solving problems, but to provide benefits. By combining the definitions of Gronroos (2000) and Vargo and Lusch (2004), it can be seen that online auctioneers must have not only the

hardware and software, but also the competences to organize processes to a high level of performance to bring value to the customers of online auctions.

4.4.2 Definitions of Service Quality

There is empirical evidence that showed a positive relationship between perceived quality and an organisation's financial performance (Ghobadian, Speller, and Jones, 1994). Improving the perceived quality of customers is important to many organisations, and defining quality is an important first step in quality improvement attempts (Ghobadian, Speller, and Jones, 1994).

Garvin (1984) described five approaches to define quality. These five approaches are Transcend, Product-led, Process or supply-led, Customer-led, and Value-led. These approaches are reviewed below.

Transcendent

In this approach, "quality" is defined as innate excellence. This approach emphasized the unparalleled features of the service or product itself, but without reference to the user's requirements or expectations, or the willingness to pay for those features. This approach has not been popular among managers as they prefer more practical approaches such as those discussed in sections (Tamimi & Sebastianelli 1996). These practical approaches are discussed in sections below. Although Sower and Fair (2005) argued that the transcendent approach to quality can be important for company that are developing radical innovations, this definition of quality has little practical applications because prior identification of determinants of quality is not possible.

Product-led

In this approach, "quality" is defined as the units of goodness packed into a product or service. Thus, a "quality" product will contain more units of goodness than a lower "quality" product (Ghobadian, Speller, and Jones, 1994). For example, a digital camera that has an optical zoom of ten times is of higher quality than a digital camera that has an optical zoom of five times only. The limitation of this definition is that it cannot be readily applied to service, because it relies on the ability to quantify the service's units of "goodness". However, in reality, it is not easy to quantify the goodness of services (Ghobadian, Speller, and Jones, 1994). In this research on online auctions, the object of study is the service provided by the online auctioneer, not the products being

auctioned, because that is outside the control of the online auctioneer. This approach is not applicable in this research.

Process or supply-led

In this approach, quality is defined as conformance to requirements (Crosby, 1979). But this definition has an internal focus – it emphasized the importance of the management and control of quality by the provider. The customer is not included in this definition. This approach is useful for organizations producing standardised products or services. However, this approach is not suitable for all kinds of service organisations. For service organisations, this approach is only applicable when the service provided involves low or short customer contact (Ghobadian, Speller, and Jones, 1994). Examples of low customer contact are postal service and garbage collection because the customer is not directly involved in the service provision process and the service delivery time is well-defined in advance. In this research on online auctions, the customer, whether as a buyer or seller, are actively involved in the searching, listing, and bidding and monitoring of the item(s). Also, they can choose to utilise a variety of services from the online auctioneer, some of them are chargeable. This non-homogeneous nature of service is referred to as “variability” by Frei (2006) and (Glushko & Tabas, 2009). There are five types of variability, namely, Arrival, Request, Capability, Effort, and Subjective Preference. Regarding arrival and request variabilities, the customers in online auctions can arrive at different times and request different services. Also, they are non-homogeneous in capacity due to their difference in knowledge, skills, or computer resources. The Process or Supply led approach to service definition is not applicable in this research.

Customer led

In this approach, quality is defined as satisfying customer’s requirements. Definitions using this approach for quality include Feigenbaum (1951)’s as “best for certain customer conditions”, Juran (1970)’s “fitness for use”, Crosby (1979)’s “conformance to requirements and, Berry et al (1988)’s definition of service quality as “conformance to customer expectations”. This approach is different from the supply-led definition in that it has an external focus. The implication of this definition is that the organisation must have the ability to determine customers’ requirements, and then to make sure its services conform to these requirements. The “customer-led” definition is broader in scope than the “supply-led” approach (Ghobadian, Speller, and Jones, 1994).

It can be seen that Crosby's definition is almost identical to Berry et al (1988)'s because both definitions used the term "conformance". That implies that in the customer's mind, there will be some kind of comparison of some characteristics of the service against some kind of criteria. According to Lewis & Booms (1983), service quality is commonly defined by how well a service level delivered matches customer expectations. In a similar vein, Bittner & Hubbert (1994, p.77) defined service quality as the consumer's overall impression of the relative inferiority (or superiority) of service provided by the organisation. Schneider & Bowen (1995) stated that when a customer enters into a service encounter with an organisation, the customer brings along certain expectations. Typically, service quality defined using this approach is applied to the delivery of professional services such as dentistry and accounting, but it has also been applied to other service types such as car repair and department stores (Parasuraman, 1995). The comparison of service received against expectations is known as the disconfirmation paradigm. The criticisms of the disconfirmation paradigm will be discussed in section "4.4.3 Disconfirmation Paradigm".

Value led

This is a holistic approach which takes into consideration the customer's requirements, product and service price and availability. An exemplar of this approach is given by Grocock (1986). His definition of service is "'the quality of a product is the degree of conformance of all of the relevant features and characteristics of the product to all of the aspects of a customer's need, limited by the price and delivery he or she will accept". This "value-led" definition of "quality" can be adopted by most service organizations (Ghobadian, Speller, and Jones, 1994). This is also the approach taken by this research as discussed earlier.

4.4.3 Disconfirmation Paradigm

The comparison of service received against expectations, as stated in the value-led approach above, is known as the disconfirmation paradigm. The application of the disconfirmation paradigm in research related to service quality has been widely criticised (Cronin and Taylor, 1992; Buttle, 1996). One counter example to the disconfirmation paradigm is that a patient goes to see the doctor and has been kept waiting. However, despite the long waiting time, the patient may still perceive the quality of service of the clinic to be good. The problem in this example reflects that the disconfirmation paradigm must be used with caution, especially in terms of the

dimension validity. This means that the researcher must make sure that the characteristic(s) being measured must be perceived as important by the consumer in that context. In the patient example above, the patient may perceive the quality of the clinic be good because the primary benefit to the patient is the professional service provided by the doctor, not the convenience of the location of the clinic, the short waiting time, and the appearance of the clinic. It has been suggested that when adaptations were made according to the context of the research, tools based on the disconfirmation paradigm can still be useful (Curry, 1999; Vinagre and Neves, 2008).

More discussions about the criticism of the disconfirmation paradigm and research using SERVQUAL, which is based on the disconfirmation paradigm, will be reviewed in the section “4.4.9 Criticisms on the SERVQUAL”.

4.4.4 Importance of Service Quality

The perceived quality of the service provided by a company is a key determinant of success or failure in the modern competitive environment. Many companies include the delivery of high levels of service as part for their strategy to position themselves more effectively in the marketplace. Therefore, service quality is one of the most researched areas in service marketing.

Previous research has shown that service quality is strongly correlated to customer satisfaction and loyalty. (Berry, 1986; Van Dyke et al., 1997; Vilares & Coehlo, 2003; Collier & Bienstock, 2006). In turn, high levels of customer's satisfaction will result in customer loyalty, and better financial performance (Buttle, 1996). Berry (1986) argued that service quality was an important differentiator that many successful goods retailers used. He reasoned that successful retailers differentiated themselves not through the goods they sold, since the goods sold were often nearly identical, but through the service they offered. Davidow (1988) suggested that service quality is important to corporate survival because service, “when added to a product, increase its utility or value to the customer” (Davidow 1988, p. 18). This is consistent with Berry (1986)'s concept of service as a differentiator, because the increase in utility, or value added, can make the company's stand out from its competitors. Fisk et al. (1993), Sweeney et al. (1999), He & Li (2011), and Udaya & Bhaskar (2011) also recognized the strategic importance of service quality for companies. If an organisation provides only service to its customers, than service quality is even more important. Therefore, service organisations should link all aspects of their activities in an effective manner in order to

provide excellent customer experiences. In the online environment, Yao and Liao (2011)'s research in online retailing revealed that service quality in web site can improve trust, reduce perceived risk, and increase consumer satisfaction.

As this research is related to the services by the operator of an online auction web site to its customers, it is necessary to review the importance of e-service quality.

4.4.5 E-Service Quality

In electronic-commerce, it is not uncommon for merchants to rely heavily on service as their source of revenue. In fact, there have been a growing number of e-commerce web sites that offer service as their main product. Exemplars of such web sites are Amazon, eBay, iTunes, Yahoo!, and Google. Therefore, the importance of e-service quality has also been studied in numerous research (Sullivan & Walstrom. 2001; Wang & Tang 2004; Arasli et al., 2005; Hwang and Kim 2006; Yen and Lu, 2008; Gregg and Walczak, 2008).

Hwang and Kim (2006) found that the service quality of web sites can improve the trust of a customer towards a web site through the mediating effects of enjoyment and anxiety. Although there have been debates regarding the distinctions between the concepts of quality and customer satisfaction, there is also evidence to support that they are closely-related concepts (Buttle, 1996). The predominant belief is that service quality is the logical predecessor to customer satisfaction, but this remains unproven (Buttle, 1996). Cronin and Taylor (1992) suggested that service quality and customer satisfaction are distinct constructs, but are related in that satisfaction mediates the effect of perceptions of service quality before the service encounter, and causes revised service quality perceptions to be formed after the encounter. Yen and Lu (2008) reported that there is empirical evidence supporting the view that satisfaction has a significant influence on repurchase intention and loyalty. Shankar, Smith, and Rangaswamy (2003) studied the relationship between satisfaction and loyalty in the travel industry and found that loyalty and satisfaction have a reciprocal relationship. That is, loyalty positively reinforces satisfaction and satisfaction positively reinforces loyalty. But more importantly, they found that this reciprocal relationship is further strengthened in an online environment (Shankar, Smith, and Rangaswamy, 2003, p.24-25). It can be seen from these researches that there is a causal link between e-service quality, and user satisfaction and corporate.

To online auctioneers, service quality is especially important because they offer service as their only product. The online auctioneer has no stock of its own, and must rely on attracting a large number of buyers and sellers to transact on its web site (Schneider, 2013). The main revenue is then the service charge for listing the items, and for offering value-added services such as highlighting a seller's items or escrow services (Chaffey et al., 2009). The online auctioneer must strive for the best possible quality of service to its customers. As stated earlier, the online auction can benefit from network economy of scale (Tapscott & Tapscott, 1999; Laudon and Traver, 2013). Hence, attracting buyers who can use the auction for free is just as important as attracting commission-paying sellers. In order to achieve this, the online auctioneer must understand the nature of service quality, and what online auction consumers look for in terms of service quality. Then the auctioneer can align its technology infrastructure, service offerings and control mechanisms to ensure customer satisfaction by giving its customers a high level of perceived service quality. In short, online auctioneers can use service as a power strategic weapon.

Definitions of E-Service Quality

E-service quality is defined by Santos (2003) as the overall customer evaluations and judgments regarding the excellence and the quality of e-service delivery in the virtual marketplace. Parasuraman et al. (2005) gave a similar definition to e-service quality by stating that "e-SQ is defined broadly to encompass all phases of a customer's interactions with a Web site: the extent to which a Web site facilitates efficient and effective shopping, purchasing, and delivery" (Parasuraman et al. 2005, p. 217). Dwivedi et al. (2010, p.208) defined service quality as the "perceived quality of service a consumer obtained or is obtaining from the current internet service providers". Parasuraman et al. (2005)'s definition is wider in scope than Santos (2003)'s and Dwivedi et al. (2010)'s definition, because it includes not only the virtual market place, as in Santos (2003)'s definition, it also includes the post-purchase stage - the facilitation of delivery of the actual delivery by the web site. In the above definitions are all customer-led. This means that the quality of service is not based on some standards set by the firm, but rather, based on the perceptions of the customer.

Companies may choose to use some tools that may seem to provide a customer-led approach to improving e-service quality. However, as the following discussion shows, these tools can provide only the process-led approach to e-service quality improvement. Recently, there are tools to assist web site designers to improve the usability of their

web sites by shifting the perspective from the designer to the customer. These tools are based on the principle of collecting information about users' habits in using a particular web site, and then applying the information to improve design of the web site design, and then collect the information again to see if what further improvements are needed (Cappel & Zhenyu, 2007; Tatari, et al., 2011, Lee & Basu, 2011; Glaholt & Reingold, 2011; Goth, 2010; Ohme, Matukin, and Pacula-Lesniak, 2011). One approach is to collect data such as users' clicks, view time and navigation patterns to improve the accessibility and navigability of a website by modifying the design of the link structure. The advantage of this approach is that it is simple and easy to implement, because the data are already captured by the web server and no extra hardware is required. However, this approach cannot discover user behaviour when no clicks are made. Another approach is to use biometric measurement techniques such as eye-ball tracking (also known as eye movement monitoring) to find out which part(s) of the web sites catch more user attention and how the user's eye focus shift from one part of the web page to another, even when no clicks have been made (Glaholt & Reingold, 2011; Goth, 2010; Ohme, Matukin, and Pacula-Lesniak, 2011). The disadvantages of this kind of biometric measurement techniques are the requirement of special hardware and difficulty in recruiting a reasonably big sample regularly for continuous improvement (Glaholt & Reingold, 2011; Goth, 2010).

But even with the help of these tools, the web site designer can only improve the usability of the web site itself, but the online auction users may be concerned with the whole purchase cycle such as the mental effort in monitoring the auction, the consideration of seller reputation, guarantee by the auctioneer, the risk and anxiety involved. The customer-led approach to e-service quality is the principle used in the measurement of service quality discussed below.

Based on the work of Sasser et al. (1978), Gronroos (1982), and his own focus groups, Parasuraman et al. (1988) concluded that the consumer's perceived quality of a service "stems from a comparison of what they feel service firms should offer, with their perceptions of the performance of firms providing the services" Parasuraman et al. (1988, p.16). Thus, Parasuraman thus made an important contribution in the operationalization of service quality by viewing it as a comparison (or difference) between customer expectations and the actual service perceived. This perspective is important because it suggests that dissatisfaction occurs if expectations are greater than actual performance. This also have implications in the way service quality should be

measured as discussed in the section “Measurement of Service Quality”. The criticisms about this paradigm and about SERVQUAL, which was derived from on this paradigm, will be discussed in section “4.4.9 Criticisms of the SERVQUAL”.

4.4.6 Measurement of Service Quality

It is important to measure service quality because it has been shown that good service quality is strongly correlated to trust, satisfaction and loyalty (Iacobucci et al. 1994; Griffin, 1996; Gefen, 2002; Kheng et al., 2010). In order to improve service quality, companies must find effective and efficient ways to identify areas in which service quality must be improved. The ability to measure service quality will enable companies to find out the existing level of their service quality, and then compare it with the level after different service improvement measures.

The quality of physical goods can be measured objectively by indicators such as durability and number of defects and check them for conformance to user requirements (Parasuraman et al.1988, p.13). The quality of service, however, is “an abstract and elusive construct” (Parasuraman et al., 1988, p.13). Unlike physical goods, the quality of service is difficult to measure because of its characteristics. Therefore, although service quality has been regarded as an important competitive factor, the development of quality concepts and philosophies such as “Total Quality Management” and “Continuous Improvement” lagged behind the manufacturing sector (Ghobadian, Speller, and Jones 1994). The characteristics of service quality that make its measurement difficult are discussed below.

Difficulties in the measurement of service quality

Fisk, Brown & Bitner (1993) did an in-depth literature review and concluded that there were four features set underpins the claim that service marketing is a field distinct from goods marketing. The four features reported by Fisk, Brown & Bitner (1993) were - intangibility, inseparability, heterogeneity, and perishability. This was adopted by authors such as Ghobadian, Speller, & Jones (1994), Edvardsson, Gustafsson, & Roos (2005), and Lovelock & Gummesson (2004).

The IHIP (inseparability, heterogeneity, intangibility, and perishability) set of characteristics were found in publications such as those by Sasser et al. (1978) and Edgett and Parkinson (1993). Other characteristics have been put forward. Rathmell (1974) suggested that one characteristic is the absence of ownership. Boyd and Walker

(1990) claimed that one characteristic of service is that it uses a different distribution channel than that of manufacturing. Korczynski (2002) put forward the characteristic of simultaneous production and consumption. However, these have not been widely accepted (Edvardsson et al. 2005). While the IHIP set is a useful framework to understand the major difference between service and goods in most situations, one should not assume that the IHIP set applies in all cases when doing research related to service quality (Edvardsson et al. 2005). The following is a review of the IHIP set of characteristics, followed by a discussion of the applicability of the IHIP in this research related to online auctions.

The first characteristic is intangibility. This characteristic states that service is different from goods, which are objects and can be made according to precise manufacturing specifications. Service is a kind of performance. Service cannot be counted, tested or verified in advance of sale to assure quality (Parasuraman et al. 1985; Edvardsson et al. 2005). The second characteristic is heterogeneity. Frei (2006) referred to this characteristic as variability. Heterogeneity means that the services, especially in a high-labour content, can vary from producer to producer, from customer to customer, and from day to day (Parasuraman et al. 1985, p.42; Frei, 2006; Edvardsson et al. 2005). The third characteristic is inseparability. That means the production and consumption of service are inseparable. Hence, the quality of a service is affected by the interaction happening between the customer and the staff of the firm providing the service (Parasuraman et al. 1985, p.42; Edvardsson et al. 2005). Examples are the service provided in a restaurant or in a hair salon. The last characteristic is perishability. This refers to the notion that service is an activity, and as such, it can not be stored. Any unused service capacity or idle time of service personnel cannot be reclaimed and used later. Typical examples are a seat on an aircraft or a place in a concert (Parasuraman et al. 1985; Edvardsson et al. 2005). Many, but not all of the IHIP set of characteristics apply in the context of online auctions, mainly because the service of online auction is different from traditional service, which is labor-intensive.

Characteristics of service quality in online auctions

Firstly, the characteristic of intangibility is applicable in online auctions to only a limited extent. Bitner (1992) suggested the concept of “Servicescape”. This means that the role of the physical environment in which services are produced and experienced by the customer is very important. This is consistent with Parasuraman et al. (1988)’s view that service quality is affected by some tangible elements such as physical facilities,

equipment, and appearance of personnel. In online auctions, there is no physical environment but there is a virtual environment. The virtual environment means the design of the web pages of the online auction web site. Chaffey et al. (2009) & Schneider (2013) claimed that web site design affects the perceived quality of the whole service offering. By this argument, the design of an online auction web site may affect the perceived service quality to a certain extent. However, the service itself still remains intangible. The characteristic of intangibility applies in online auction to a limited extent.

Secondly, the characteristic of heterogeneity also applies in the online auction situation. This may seem to contradict the results found by Vargo and Lusch (2004) when they study the service quality of IT-related systems. They claimed that standardized procedures and databases generate homogeneous, instead of heterogeneous, service to customers. It seems that the same reasoning can be applied in online auctions because most of the transactions are completed without any direct encounter between the customer and staff from the auctioneer. The service cycle of listing the item, bidding, notification of winning, rating of seller/buyer, payment of service charge and escrow services (if involved), are all completed automatically via the Internet. It is automated and pre-programmed, so the service to each customer is the same. However, Chen & Dubinsky (2003) pointed out that each customer is different in terms of their knowledge and experience in using online systems. They found that this difference played an important role in the determination of perceived value of online services. Furthermore, Shehryar (2008), in his study about bidding behaviour in online auctions, he found that there is a significant correlation between the use of certain online auction features and the bidder's attitude towards risk. Therefore, the source of the heterogeneity stems from the customer, rather from the procedure or databases. The characteristic of heterogeneity applies in online auctions.

Thirdly, the characteristic of inseparability also applies in online auctions. Although Lovelock & Gummesson (2004) mentioned that inseparability is an oversimplification, because there are services that can be delivered separated from the customer such as car repair and information services. In these services, customers are not directly involved and the consumption of the benefits can only take place after the customer reclaims the item, typically some time after the provision of service has completed. There are situations in which even consumption of benefits actually precedes service provision, such as when a customer pays a bill by writing a check that may not be processed until

several days later. However, there are situations in which the customer becomes engaged in the service production and consumption that the customer effectively becomes a partial employee (Lovelock & Gummesson, 2004). Inseparability of production and consumption is linked to the concepts of interaction and the service encounter (Solomon et al., 1985). The latter concept is so important that it was stated as “moments of truth” (Buttle, 1996).

In an online auction, the buyer and seller conduct their transactions as facilitated by the web site of the auctioneer. There are interactions between them preceding, during, and after the winning of the item. Firstly, the seller has to list the item in the auction, provide suitable information, upload pictures, and provide hyperlinks to related information if necessary. Before the bids are made, the buyer has to search the web site for the item. Then, if the buyer has questions, he or she can raise questions through a mechanism provided by the auctioneer. When the seller answers the question, both the question and answer will be made available to all other visitors who are interested in the item. After the item is won, the auctioneer will provide contact details to both parties so that they can get in touch directly to complete the deal. Finally, both will provide a feedback rating and comments on the web site about their experience of the transaction. It can be argued that both the buyer and seller are co-producers of an online auction process. Given this close interactivity among the buyer, seller, and auctioneer, the characteristic of inseparability also applies to online auctions.

Given that the three of the four characteristics of services are applicable to online auctions, and the SERVQUAL is a widely used tool for measuring service quality for almost 25 years, the author will review SERVQUAL and its underpinning theory, and then the criticisms around it and subsequent efforts to augment it to become suitable for measuring online services.

4.4.7 SERVQUAL and the Gap Model

The SERVQUAL was a measurement instrument for service quality. It was developed by Parasuraman et al. in 1988, based on the Gaps Model put forward by Parasuraman et al. in 1985. It has been widely used for more than 25 years in marketing research related to service quality in traditional business and electronic commerce, despite many criticisms against it. It is also the basis for many tools for measuring the quality of traditional and online businesses. For example, the IS-SERVQUAL (Kettinger and Lee, 1994), the WebQual (Barnes, 2001), the SiteQUAL (Yoo & Donthu, 2001), and the EC-

SERVQUAL (Wang and Tang, 2004) are all based on the SERVQUAL. In fact, Parasuraman et al. (2005) put forward their own version of measuring tool, E-S-QUAL, for online services. It is important to review the SERVQUAL for the underpinning theory, the criticisms and its adaptations for electronic commerce.

The underpinning theory of the SERVQUAL is the Gap Model. Measuring the quality of service is just one of the aspects of service quality improvement. Executives of service firms may not always understand why service quality does not meet customer expectations, despite the resources and effort they have invested. Another important aspect is to understand why and where service quality falls short of customer expectations. The Gap Model proposed by Parasuraman et al. (1985) depicts how discrepancies, or gaps, exist regarding the executive perception of service quality and the customer perception of service quality based on actual service encounters.

Parasuraman et al. (1985) conducted in-depth personal interviews with executives from four service categories. The executives selected range from marketing, operations, senior management and customer relation. This range was used because each of those areas could have a major role to play in causing gaps between customer expectations and actual perceive service quality. Then twelve group interviews were conducted involving current or recent users of those four service categories (Parasuraman et al., 1985). As a result of the in-depth interviews with the executives and focus groups with the users, Parasuraman et al. (1985) identified five gaps that contribute to the overall gap between the customer's expectation and perceived service quality is the overall effect of all the five gaps.

In the gap model show in Table 4.3 below, the customer's perception of service quality is influenced by five gaps. (Parasuraman et al. 1985, p.44-46).

Table 4.3: The gap model proposed by Parasuraman et al. (1985)
(Source: Compiled by the student for the thesis)

Gap 1	The difference between customer expectations and management perceptions of customer expectations.
Gap 2	The difference between management perceptions of consumer expectations and the translation of these perceptions into service-quality specifications.
Gap 3	The difference between the service actually delivered by frontline service personnel on a day-to-day basis and the specifications set by management.

Gap 4	The difference between service delivery and what is promised in external communications to consumers.
Gap 5	The difference between customer expectations and perceptions.

The Gap Model is based on the disconfirmation paradigm. The Disconfirmation Paradigm is discussed in section “4.4.3 Disconfirmation Paradigm”. Based on the Gap Model, the SERVQUAL was developed by Parasuraman et al. in 1988. Since then, a number of service quality measuring tools have been developed based on SERVQUAL itself. For example, the Quality Function Deployment (QFD) method has been used in the hospitality industry to capture the feedback of the customer in service encounters and as input to service development (Crick and Spencer, 2011, p.11). The SERVQUAL, and its criticisms, will be discussed in the next section.

4.4.8 SERVQUAL – the dimensions in service quality

In the SERVQUAL model, quality was defined as an overall evaluation of a specific service firm that results from comparing that firm’s performance with the consumer’s general expectations of how firms in that industry should perform (Parasuraman et al. 1985, p.41). It can be seen from the Gap Model that every step between the executive perception of customer expectation of service quality, to the actual delivery of service to the customer, is crucial to the ensuring good service quality. Based on this gap model, the initial SERVQUAL was developed by Parasuraman et al. (1985). The initial SERVQUAL contained ten dimensions, namely, Access, Communication, Competence, Courtesy, Credibility, Reliability, Responsiveness, Security, Tangibles, And Understanding/Knowing the consumer (Parasuraman et al. 1985, p.47). But there was a need for a concise measuring instrument and that was reliable and meaningful across service sectors. Hence, three years later, Parasuraman et al. (1988) did another study and used factor analysis to purify and refine the ten dimensions. The result of the purification and refinement was that the dimensions of Tangibles, Reliability, and Responsiveness remained as separate dimensions. The dimensions of Communication, Credibility, Security, Competence, and Courtesy were combined under the name of Assurance. The dimensions of Understanding/Knowing the consumer and Access were combined under the name of Empathy. In summary, the five dimensions in SERVQUAL are, namely, Tangibles, Reliability, Responsiveness, Assurance and Empathy (Parasuraman et al. 1988, p.12). These five dimensions are listed in Table 4.4 below.

Table 4.4 Service Quality Dimensions defined by Parasuraman et al. (1988)
(Source: Compiled by the student for the thesis)

Dimension	Description
Tangibles	The appearance of physical facilities, equipment, and personnel;
Reliability	The ability to perform the promised service dependably and accurately;
Responsiveness	The willingness to help customers and provide prompt service;
Assurance	The knowledge and courtesy of employees and their ability to inspire trust and confidence;
Empathy	The level of caring and individualised attention the firm provides to its customers.

The measurement instrument of SERVQUAL is consistent with the definition of service quality given by Parasuraman et al. (1985, p.41). Each item is measured on the basis of responses to two statements that measure: the general expectations of customers concerning a service (E) ; and the perceptions of customers regarding the levels of service actually provided by the company within that service category (P). Both E and P are measured on a 7-point Likert scale. The score for each item is a difference score, defined as $Q = P - E$ (Parasuraman et al. 1998, p.19). The difference score of Q will vary from -6 to +6 (Parasuraman et al. 1998, p.30).

The SERVQUAL, despite its widespread use, has been a topic of debate in the academic world. The criticisms around SERVQUAL are discussed in the next section.

4.4.9 Criticisms of the SERVQUAL

The Conceptual Foundation of Difference Scores

As explained above, the SERVQUAL is based on a set of difference scores. The use of difference scores has been argued by many scholars. Brown et al. (1993, p.129-130) questioned the validity of using difference scores in SERVQUAL. He used a mathematical formula to show that “difference scores often demonstrate poor reliability” (Brown et al. 1993, p.130). Furthermore, the discriminant validity of the constructs in SERVQUAL was questionable because the unreliability of the constructs makes them appear to process discriminant validity (Brown et al. 1993, p.130). Teas (1994) argued that the concept of expectation was loosely defined and this could lead to serious measurement validity problems. Discriminant validity means the degree to which measures of two constructs are empirically distinct (McKnight, 2002, p.310).

Cronin and Taylor (1992, p.64) stated that the conceptualisation and measurement of service quality as provided by SERVQUAL was based on a flawed paradigm. Similarly, Ekinci and Riley (1998) claimed that the use of the different scores in SERVQUAL had no equivalent in psychological function.

Peter et al. (1993) and Cronin & Taylor (1992) argued that if performance scores are used instead of perception-minus-expectation scores, the reliability and convergent validity of the measuring instrument would be improved. Convergent validity means that evidence from different sources gathered in different ways all indicates the same or similar meaning of the construct (Lin and Wu, 2002 p.209). In particular, Cronin and Taylor (1992) found empirical evidence the SERVPERF instrument, which is based on performance scores, instead of difference scores, was operationally more efficient than and theoretically superior to SERVQUAL.

This research is to find out what customers perceive as important in the service quality provided by online auctioneers, but not by any specific online auction web site. This means there is no need to use a gap score to compare the customer expectation for an industry with the actual perceived service quality of a particular web site. Hence, it is more suitable to use the performance scores, which measures the same underlying dimensions of service quality, but uses fewer items for better efficiency.

The Unstable Dimensionality of the SERVQUAL

Some researchers found that the dimensional structure of SERVQUAL is not reliable across service settings. That is, the five dimensions, as put forward by Parasuraman et al. (1988) may not be applicable to all service industries or to settings within the same industry. As early as 1991, the study by Carman (1990) showed that the number of dimensions in the SERVQUAL scales could vary from five to nine, depending on the industry. Later, Finn and Lamb (1991) evaluated the SERVQUAL scales in four types of retail stores and using confirmatory factor analysis. They concluded that SERVQUAL scales did not exhibit the five-factor structure. This is consistent with the study by Pitt et al. (1995) in the information system industry in which the number of dimensions can vary from three to seven, depending on the sample site.

In the logistics industry, Durvasula et al. (1999)'s study reported that the dimensions of "reliability", "responsiveness", "assurance", and "empathy" could be combined into one single dimension. In a study about perceived service quality in the banking industry, Gounaris et al. (2003) found a similar result, reporting that only the dimension of "tangibles" is distinct from the other dimensions.

Subsequent studies also reported inconsistencies across and within industries. For example, Arasli et al. (2005)'s findings in the banking industry is different from those reported by Gounaris et al. (2003) in the same industry. Arasli et al. (2005) concluded that the items for "responsiveness" and "empathy" load onto one dimension while the "assurance" dimension could be eliminated from the scale. Taylor et al. (1993) investigated the validity and reliability of generalizing SERVQUAL by using a sample size of 267 questionnaires across seven recreational facilities in the United States. He pointed out that "researchers should confirm the factor structure ... to ascertain how many dimensions are implicit in their own sample relative to their respective industry" (Taylor et al., 1993, p.81). It can be seen that there is empirical evidence that when SERVQUAL is used, particular attention must be paid to structure of dimensions.

The above discussion around the apparent unstable dimensionality revealed one important point; the sample involved can be the source of the issue. While both Arasli et al. (2005)'s and Gounaris et al. (2003)'s research are about banking in Europe, closer examination reveals that the sample of Gounaris et al. (2003)'s research is in the "general area of Athens" (Gounaris et al., 2003, p.171), compared with the sample of Arasli et al. (2005)'s is from the island of Cyprus. Cyprus is a sovereignty state with its own currency, the Cyprus pound (CYP£). The discrepancy in the dimensionality may be reflecting the real difference between these two locations in two countries. This

means there is a genuine fundamental difference between the service quality perceptions in terms of dimensions between these two places due to their geographical and political differences. The sample of this research will be from the small city of Hong Kong, so the issue of unstable dimensionality should be minimized.

Since the dimensions in SERVQUAL was first conceived in 1988, before the wide spread use of the Internet, there is a need to review if the dimensions in SERVQUAL are suitable in the online environment.

Suitability of SERVQUAL in the online environment

Some studies extended the use of SERVQUAL, which was developed for the measurement of service quality in a traditional face-to-face service context, to the online environment. The results were mixed. For example, Gefen (2002) applied an adapted SERVQUAL instrument to the online service context and reported that the five dimensions collapsed into only three. However, Kettinger and Lee (1994) used IS-SERVQUAL, an adapted version of SERVQUAL, and reported a different result. The IS-SERVQUAL consisted of the same five dimensions and the same number of 22 questions. Response was collected from 342 undergraduate and graduate students at a research university in Columbia, the U.S. They found that the five dimensions were significant predictors of user satisfaction.

The variance in the dimensions can be explained by the fact that Gefen (2002) conducted the research in Asia while Kettinger and Lee (1994) conducted the research in the U.S.A. and the researches were done eight years apart. Also, they adopted SERVQUAL not in the exact same way. But what is important is that the dimensions of SERVQUAL did apply in these studies related to online service quality, although some of them can be combined with other dimensions. With some suitable modifications, the SERVQUAL can be used to measure online service quality.

4.4.10 Support for SERVQUAL

The above criticisms are not undisputed. Parasuraman et al. (1994) responded to the criticisms on the use of difference scores by arguing that they provided information by indicating to the company the direction and the amplitude between expectation and perception. It would be more useful to the company to take actions to improve its service quality. Angur et al. (1999) supported this view by reporting that the gap model was more practical than the perception only model for investigating particular service

deficiencies. Other authors also supported the use of different scores. For example, Carrillat et al. (2007) did a metanalysis on 17 studies and concluded that the two models (i.e. SERVQUAL and SERVPERF) exhibit the same predictive validity.

Furthermore, some authors such as Kettinger and Lee (1999) and Wang and Tang (2004) stated that with the criticisms in mind, the SERVQUAL's effectiveness was well documented and its strengths and weaknesses are well understood. Therefore, by adequately rewording, modifying, and/or augmenting the items within each dimension of SERVQUAL can enable it to be applied across industries, including electronic-commerce (Curry, 1999; Vinagre and Neves, 2008).

In summary, despite the criticisms, there are also support for the practical use of SERVQUAL, provided that the measuring instrument is properly contextualised. The following section reviews some research in the electronic-commerce industry, some built upon SERVQUAL as their basis, some developed their own scales.

4.4.11 Research on e-service quality measure

Because the original SERVQUAL dimensions related directly to the human interaction element of service delivery, some researchers cautioned the direct use of SERVQUAL in measuring the quality of information technology based systems or quality of service delivered by e-commerce. (Van Dyke et al. 1997; Loiacono et al., 2000; Kettinger and Lee, 2005, Wang and Tang, 2004)

Loiacono et al. (2000) developed an instrument called WebQual. It is a scale containing 12 dimensions for measuring Web sites service quality. However, their study was trying to generate information for Web site designers rather than to measure service quality as experienced by customers. For example, there is a dimension called Innovativeness, which is not really about the customer's perceived quality of service by the web site. Another shortcoming is that the study asked students to evaluate some web sites by visiting them, rather than making actual purchases. Some important aspects of customer service such as compensation in case of goods not delivered, was not measured at all.

Likewise, Yoo & Donthu (2001) created SITEQUAL, which is a 9-item scale for measuring site quality on four dimensions: ease of use, aesthetic design, processing speed, and security. Just like in WebQual's case mentioned above, students were asked to visit some online shopping sites and then evaluate each site. The scale is designed so that the respondent does not need to complete the purchasing process. In this research,

the SITEQUAL is at best just a stage-specific assessment of a site rather than a comprehensive evaluation of the service quality of a site.

The above cases showed that without a generally accepted underpinning theory such as the Gap Model and the widely scrutinised tool such as the SERVQUAL, efforts to create one's own version of service quality measure may not be effective and efficient.

Some researchers tried to test the applicability of the SERVQUAL to online service quality. Wang and Tang (2004) examined the SERVQUAL using reliability and validity testing by structural equation modelling approach. They discovered that there was no significant relationship between the tangible dimension and customer perceptions of the web service quality, similar to the finding of similar research. This finding was supported by the work of Gregg and Walczak (2008 p.653) and Zhu, Wymer, and Chen (2002, p. 69). Using their result, Wang and Tang (2004) created the EC-SERVQUAL with only four dimensions. The four dimensions in EC-SERVQUAL are Tangibles, Reliability, Responsiveness, and Assurance & Empathy. However, Wang and Tang (2004) also claimed that the stability and consistency of EC-SERVQUAL needs more empirical testing. The measuring instrument of EC-SERVQUAL has been used in a number of studies, ranging from general e-commerce, online banking to e-government (Leung and Lee 2006; Mummalaneni and Meng 2009; Wang and Liao 2008; Yu and Lo 2007). It should be noted that most of the research done using EC-SERVQUAL was done in a Chinese culture context. Also, there is little or no research done on Internet auction using EC-SERVQUAL.

The weakness of the SERVQUAL, and its modified forms such as the EC-SERVQUAL, is that they focus on only one stage of electronic-commerce – the interaction of the user with the web site (Zeithaml, Parasuraman, & Malhotra, 2002; Parasuraman et al. , 2005). These tools do not effectively address two important issues in electronic-commerce. The first issue is the fulfilment of the order. This deals with the delivery of the goods and services after the customer actually placed an order. The second issue is the how the customer can recover from problems when they occur. These problems can range from difficulties in navigating the web site, to getting compensations when the goods and services do not match their descriptions. To overcome the said issues above, Parasuraman et al. (2005) created a measurement tool, which consists of two parts, known as E-S-QUAL and E-RecS-QUAL respectively. E-S-QUAL measures the normal service process, and E-RecS-QUAL measures the recovery service offered by the web site. This tool is reviewed in the next section.

4.4.12 E-S-QUAL and E-RecS-QUAL

The EC-SERVQUAL is an exemplar of the measurement tools that are based on the SERVQUAL. Basically, the various authors of these tools picked some of the five dimensions and add / modify or delete some items in the questionnaire. However, Parasuraman et al. (2005) put forward a new measuring tool which actually consists of two parts, the E-S-QUAL and the E-RecS-QUAL.

The significance of Parasuraman et al. (2005)'s work is that it specifically takes into account the customer's expectations of online service, and also the recovery process when there is problems with the online service. The dimensions for E-S-QUAL, which is for measuring the normal service process, are as follows (Parasuraman et al. , 2005 p.220):

1. Efficiency: The ease and speed of accessing and using the site.
2. Fulfilment: The extent to which the site's promises about order delivery and item availability are fulfilled. However, in online auctions, the auctioneer is only an intermediary facilitating the transaction. It is the seller that is actually responsible for fulfilling the order. For this reason, “fulfilment” will not be included in our research.
3. System availability: The correct technical functioning of the site.
4. Privacy: The degree to which the site is safe and protects customer information.

Recovery service involves different dimensions than the normal service dimensions (Zeithaml, Parasuraman, & Malhotra, 2002). For instance, in normal, routine interactions with web site, the consumer does not have to be concerned about how to contact a site, the way the company handles problems, or whether they receive compensation if problems do occur. However, when the consumer encounters a problem and need to find a solution, then the issues of contact and compensation become relevant (Zeithaml, Parasuraman, & Malhotra, 2002; Parasuraman et al. , 2005). The dimensions for the E-RecS-QUAL, which is for measuring the quality of the recovery service provided by the web site, are as follows (Parasuraman et al. , 2005 p.220):

1. Responsiveness: Effective handling of problems and returns through the site. In this research, this dimension will be contextualized so that only the auctioneer’s responsiveness in handling problems that the buyer and seller could not resolve themselves.
2. Compensation: The degree to which the site compensates customers for problems. In this research, the problems involved in online auctions that require compensation are of two kinds. The first kind is that payments not received by sellers after goods are sent. The second kind is that goods are not received by the buyer at all or goods received do not match their descriptions on the auction.
3. Contact: The availability of assistance through telephone or online representatives when the user has some problems, but the online help cannot effectively solve the problem.

As one of the objectives of this research is to find out what aspects of service quality is perceived as important by customers in online auctions, so both the E-S-QUAL and E-RecS-QUAL will be included in the data collection. Also, the research will try to use in-depth interviews to find out if there are other aspects of service quality that may be perceived as important by online auction customers. Because the online auctioneer is an intermediary, this research will only focus on the factors that are directly under the control of the online auctioneer.

Chapter 5 - Literature Synthesis

The overall aim of this research is to find out the factors that affect the adoption of online auctions by Internet users in Hong Kong, so as to enable online auctioneers in Hong Kong to achieve competitive advantage through improving their web sites and service quality.

This section brings together the theories and previous research in order to develop the research objectives. Then the research methodology and data collection methods will be chosen based on these objectives.

The literature review showed among all the values generated by a company's operation, customer value is the most important because that is the driver of all other values such as shareholder value and stakeholder value (Woodruff, 1997; Khalifa, 2004; Zhu, 2010). To examine customer value from the correct perspective, it is important to define who the customer is in online auctions. The typical online auctioneer only charge service fees to the seller, and the other participants can use the service fee of charge. It may be said that only the seller is the customer to the online auctioneer. However, in this study, the customer is either a buyer or seller of an online auction. It is because the large number of participants is essential to attract sellers due to Network Economies of Scale (Tapscott & Tapscott 1999).

In the context of service provided by in e-commerce, the literature review shows that there are four major dimensions of customer value – Benefits, Transaction Cost, Risks, and Service Quality (Boyd & Walker, 1990; Kotler ,2000; Sanchez et al., 2006; Grönroos, 1997; Chircu & Mahajan, 2005; Cox & Rich, 1967; Forsythe & Shi, 2003; Lemmink & Mattson, 1997; Sweeney & Soutar, 2001; Chen & Dubinsky, 2003).

The objectives of this research are:

- OBJ1: Identify Hong Kong Internet user's perceived benefits of online auctions.
- OBJ2: Identify Hong Kong Internet user's perceived transaction costs of online auctions.
- OBJ3: Identify Hong Kong Internet user's perceived risk of online auctions.
- OBJ4: Identify Hong Kong Internet user's perceived service quality of online auctions.

As suggested by Bunduchi (2005) and Lai et al. (2010), it is often necessary to make use of more than one theory when conducting research. In this study, the relevant theories

are the Technology Acceptance Model, the Transaction Cost Economics, and the SERVQUAL. Table 5.1 summarizes the relationship between the dimensions of customer value and the theories.

Table 5.1 Relationship between the dimensions of customer value and the theories

(Source: Compiled by the student for the thesis)

Theories Dimensions of customer value	TAM (Technology Acceptance Model)	TCE (Transaction Cost Economics)	SERVQUAL
Benefit	Perceived Usefulness		
Transaction Cost	Perceived Ease of Use	Asset Specificity	
Risk		Uncertainty	Privacy *
Service Quality			Efficiency * System Availability * Responsiveness # Compensation # Contact #

* These are the constructs in the E-S-QUAL. (see section 4.4)

These are the constructs in the E-RecS-QUAL. (see section 4.4)

The following sections will show how the research questions are derived from the literature.

5.1 TAM (Technology Acceptance Model)

The first dimension of customer value in our study is benefit. The TAM mainly explains the benefit, and partially transaction cost aspects of customer value. The TAM is based on the TRA (Theory of Reasoned Action) and the TPB (Theory of Planned Behaviour) (Davis, 1989). The TRA explains that all human behaviours are based on their beliefs, which contribute to the formation of their attitudes (Fishbein & Ajzen, 1975). Their attitudes affect their behavioural intentions, which in turn guide their actual behaviour. Later, the TPB was created as a response to the criticism that the TRA did not consider the factor of volition control (Ajzen, 1991).

The TAM was developed by Davis (1989) to explain the acceptance of technology by users in organizations. The basic constructs in TAM were perceived usefulness (PU) and perceived ease of use (PEOU) (Davis, 1989). In the context of this study, the PU refers to the benefit aspect of customer value. The PU of online auctions in general includes Liquidity, Entertainment, Excitement, Price Discovery, Price Transparency, and Opportunities (Giot & Grammig, 2006; Turban, King and Lang, 2011; Schneider, 2013; Wolfinbarger, 2001; Möllenber, 2004; Ockenfels et al. 2006; Jank & Shmueli, 2010; Charki, Josserand And Charki, 2011). There is a need to find if these benefits are important in affecting the online uses in Hong Kong to adopt online auctions, or there are other benefits that are important as well.

Research Question 1: What are the perceived benefits by Internet users in Hong Kong in the adoption of online auctions? Do they include Liquidity, Entertainment, Price Transparency, and Excitement? What other benefits may be involved?

The PEOU reflects part of the transaction cost because it only considers the effort aspect of the transaction cost. Also, the original TAM has been criticized for not including some important factors that may affect the acceptance of technologies in non-organisational context (Venkatesh & Bala 2008; Brown, 2009). Firstly, the user, as a staff, has no direct control on the adoption of the technology. Secondly, and the company will paid for the time and transaction cost involved. Finally, there is no personal risk to the user. However, as online user, the customer has total volition control of the shopping channels to use. The customer has to bear the various types of transaction costs, such as service charge, time and effort. Furthermore, the consumer has to consider the various types of risks involved in using online auctions, such privacy issues. Therefore, there is a need to complement the TAM by other theories. The Transaction Cost Economics (TCE) is therefore used to explain the other parts of the transaction cost, and the issue of risk.

5.2 TCE (Transaction Cost Economics)

The second and third dimensions of customer value in our study are transaction cost and risk. The TCE helps to explain the transaction cost aspect of customer value in this research by considering the transaction cost and risk aspects. The basic principle of TCE is that the user will prefer one form of transaction over the others if that particular form of transaction is the most economic way of conducting that transaction (Williamson, 1979; Williamson, 1981). In a service context, the transaction cost includes the service charge, time, effort and risk (Teo and Yu, 2005). Since this study is about the value of the service provided by online auctioneers, the transaction cost involved does not include the cost of the product charged by the seller. In this study, the relevant constructs of the TCE are asset specificity and uncertainty.

Asset specificity means the lack of ease with which the human capital, physical assets, and facilities specifically tied to the manufacturing of an item can be put to alternative uses (Williamson, 1981). The higher the asset specificity, the less likely that asset can be used in elsewhere. In electronic commerce, it has been found that that the vendor's reputation is also a form of asset specificity (Yen et al.(2009; Chen and Dubinsky ,2003). In online auctions, the user's reputation (in the form of ratings and

feedbacks received) and knowledge in using an online auction web site can be a form of asset specificity. It is necessary to find out if online users will restrain from opportunistic behaviour in order to maintain their brand name specificity in the form of reputation rating.

Research Question 2: What are the transaction costs perceived by Internet users in Hong Kong in the adoption of online auctions? Do they include time, effort and service charge, the user's reputation? What other costs may be involved?

Uncertainty relates to the element of risk involved in the use online auctions. The literature review shows the risks that are relevant to this study are: financial risk, psychological risk, social risk, and privacy risk (Miyazaki and Fernandez, 2001; Lee, 2009; Almousa, 2011). It has been found that consumers may choose to a number of methods to reduce risk – either by reducing the uncertainty or reduce the loss (Cox and Rich, 1964; Roselius, 1971). Roselius (1971) suggested consumers rely heavily on the brand to reduce risk.

There is a need to find out what the major risk perceived by Internet users when they consider the adoption of online auctions.

Research Question 3: What are the risks perceived by Internet users in Hong Kong in the adoption of online auctions? Do they include financial risk, psychological risk, social risk, and privacy risk? What other risks may be involved?

5.3 SERVQUAL (Service Quality)

The fourth dimension of customer value in our study is service quality. The SERVQUAL, which was based on the Gaps Model, was a framework for understanding and measuring the dimensions of service quality (Parasuraman et al., 1988). The E-S-QUAL and the E-RecS-QUAL were measuring instruments derived from SERVQUAL for measuring the quality of service provided through the Internet (Parasuraman et al. , 2005). The E-S-QUAL measures the quality of service provided by the web site when no problems occur. It consists of four dimensions - Efficiency, Fulfillment, System Availability, and Privacy. The fulfillment dimension of the E-S-QUAL was found to be not applicable in this study because the action of the individual seller is not under the control of the online auctioneer. This is consistent with the suggested directions for future use Parasuraman et al. (2005). The E-RecS-QUAL measures the quality of service to enable a customer to recover from problems. It consists of three dimensions - Responsiveness, Compensation, and Contact. The compensation dimension was not applicable in this research. It was because compensations was about problems encountered in fulfilment, which was not under the direct control of the auctioneer. There is a need to find out to what extents these dimension are considered by the Internet users in Hong Kong.

Research Question 4: What aspects of service quality are considered by Internet users in Hong Kong when they choose an online auctioneer? Do they include Efficiency, System Availability, and Responsiveness, and Contact? What other aspects of service quality may be involved?

5.4 Summary

This section provides a synthesis of the literature that is relevant to this research into the the factors that affect the Internet user's adoption of online auctions in Hong Kong. The objectives of this research are described and the literature related to the TAM, TCE and SERVQUAL have been reviewed.

In order to select the right research methods and data collection procedures, it is necessary to review the major research paradigms and then adopt the most suitable one for this study.

Chapter 6 - Methodology

The structure of this chapter is as follows. Firstly, it will discuss the philosophical frameworks that guide research work and why Interpretivism is suitable for this research. Secondly, it will review the qualitative and quantitative research strategies and explain why this research used both methods. Thirdly, it will justify the use of focus groups and a questionnaire as data collection techniques. Finally, it will discuss the choice of samples for data collection.

6.1 Research Paradigms

A research paradigm is “a philosophical framework that guides how scientific research should be conducted” (Collis and Hussey, 2009, p.55). Another definition, which is more detailed, is that "a paradigm is a cluster of beliefs which influence scientists in a particular discipline what should be studied, how research should be done, and how results should be interpreted" (Bryman and Bell, 2007, p.25). These definitions show that a paradigm is the collective range of beliefs, principles, limits and frameworks that defines a particular approach to research. The choice of a particular paradigm will affect a wide range of different aspects of the research. These aspects include the basic methodological design, the size of the sample, the method of collecting and analysing the data, and the interpretation of the analysis and conclusions (Saunders et al., 2009).

Although the term paradigm is frequently used in social sciences, one of the problems with the term is that it tends to have multiple meanings. It can be stated that there are two main research paradigms, namely, Positivism and Interpretivism (Collis and Hussey, 2009; Hudson and Ozanne, 1988). An overview of these paradigms is given below.

6.1.1 Positivism

Positivism is based on the belief that there is an objective reality which is independent of us. The only meaningful way to discover that reality is through empirical research based on observations and experiments (Collis and Hussey, 2009). Under positivism, theories provide the basis for explanation and prediction of phenomena. A variable is an attribute of a phenomenon that could change and takes different values which are capable of being observed and measured. A theory is a set of interrelated variables, definitions and propositions that specify the relationship between the variables. Postivist researchers in business focus on theories to explain or predict social phenomena. They believe that since reality is independent of us, the act of investigating social reality has no effect on reality (Creswell and Clark, 2007).

While positivism is effective in the study of inanimate objects in the physical world, such as the properties of matter and energy and the interaction between them, it has been criticised for being inadequate to meet the needs of social scientists (Collis and Hussey, 2009). This view is consistent with an earlier argument that "positivism, especially in the social sciences, is not regarded as an approach that will lead to interesting or profound insights into complex problems, especially in the field of business and management studies" (Remenyi et al., 1998). In the realm of social science research, it is impossible to separate people from the social context in which they exist. However, people cannot be understood without examining the perceptions they have of their own activities. Moreover, researchers are not objective, but are part of what they observe. They bring their own interests and values to the research (Collis and Hussey, 2009). Interpretivism is a research paradigm that can overcome the weaknesses of positivism.

6.1.2 Interpretivism

Interpretivism developed as a result of the perceived inadequacy of positivism to meet the needs of social scientists (Collis and Hussey, 2009). Interpretivism is based on the belief that social reality is not objective, but rather highly subjective, as it is shaped by human options. This research paradigm is also known as the descriptive or phenomenological approach.

Under interpretivism, the approach to research unfolds as the research proceeds. Data collection in the early stages guides subsequent phases of evidence collection, and the interpretation of the evidence itself (Remenyi et al., 1998). While positivist researchers focus on measuring social phenomena, interpretivist researchers focus on exploring the complexity of social phenomena with a view to gaining interpretive understanding. Therefore, interpretivists adopt a range of methods that "seek to describe, translate and otherwise come to terms with the meaning, not the frequency, of certain more or less naturally occurring phenomena in the social world" (Van Maanen 1983 p.9). The following table summarises the approaches of positivism and interpretivism.

Table 6.1 Differences between Positivism and Interpretivism
Source: Adapted from Collis and Hussey (2009, p.58)

Assumptions	Positivism	Interpretivism
Nature of reality	Objective, Single, Divisible	Socially constructed, Multiple, Holistic
Overriding Goal	Explanation via subsumption under general laws, prediction	Understanding based on interpretation of human actions from a social actor's point of view.
Knowledge generated	Time-free, context independent	Time-bound, context dependent
Researcher/subject relationship	Separation, Privileged point of observation	Interaction, Cooperative, No privileged point of observation
Data collection techniques	Large samples, measurement	Small samples, in-depth investigations

6.2 The Research Paradigm Adopted for this Research

This research will adopt the Interpretivist paradigm because it fits two main aspects of this research. Firstly, this research aims at finding the factors perceived as important by Internet users in the adoption of online auctions. This involves soliciting and understanding the subject's opinions in a social context. Secondly, there is no one definitive theory in this area, the researcher has to interact with the subjects in order to raise questions, clarify meanings, and obtain insight into their viewpoints. The approach to the research will unfold as the research proceeds. Firstly, the author will review some literature which will show the possible factors affecting the adoption of OLAs. Secondly, the author will meet with subjects to collect opinions about those possible factors, and assess whether new factors should be added. Through the interaction with the subjects, the researcher will collect data that is rich in information, but cannot be measured using numbers. Thirdly, the author will try to apply the results collected to a sample of Internet users in Hong Kong to see if there are any common characteristics in their perceptions of the factors. Finally, if the results collected from the sample of users reveal special findings, the researcher will meet with some more subjects to seek explanations of those findings.

For the second and third steps above, a combination of qualitative and quantitative methods will be used. It is because in step two, when the author meets with a small

group of subjects to collect opinions, qualitative methods have to be used because they allow the researcher to interact with the subjects, and the subjects to interact among themselves to clarify ideas and get answers that are rich in meaning. In step 3, when the author tries to investigate if the subjects in a larger sample have the same opinion or not, it is infeasible to repeat the same interaction with the research and among the subject themselves. Therefore, quantitative methods are needed to collect answers from the larger sample in a structured manner. The answers should be expressed as numbers so that they can be measured and compared. In the following section, the author reviews qualitative and quantitative research methods.

6.3 Qualitative Research Methods

Qualitative research methods are mainly used for studying complex phenomena that cannot be easily represented in terms of variables and numbers. The focus is on understanding the social world through an examination of the interpretation of that world from the point of view of the people concerned. This method is suitable when there are interactions between the individuals being studied. The flexibility of this method allows the researcher to interact with the subjects and ask questions that lead to informative answers, which in turn may suggest points for further investigation. The data collection methods include participant observation, semi-structured interviews, unstructured interviews, focus groups, and case studies (Kaki, 2005).

Qualitative research has the advantage that it can be used when there is no current well-established theory in the area of study. It is useful during the early stages of a study when relatively little is known. The researcher can make changes later on based on the initial findings. Another advantage is that the results collected are more detailed and richer than those collected using quantitative research (Bryman and Bell, 2011).

Qualitative research has disadvantage of external validity (Collis and Hussey, 2009). Limited external validity in this sense means that the findings from a sample cannot be generalised to the population as a whole. It can be argued however that qualitative research based on data collection methods such as case studies can be replicated to generalise theories. Yin (2009) explained that as long as the exact conditions of the original research are duplicated, additional research can be conducted to prove or disprove the theories. If the additional research yields the same findings, the theories developed from the original research will be considered more robust. Yin (2009) further stated that researchers can choose whether to carefully duplicate the exact

conditions and predict similar results (literal replication), or vary some aspects of the conditions and “predict contrasting results but for anticipatable reasons (theoretical replication)” Yin (2009, p.52). However, Yin’s (2009) assertion leads to another limitation of qualitative research: Qualitative research studies cannot be easily replicated because the procedures are not highly structured (Cooper, 2011). Hence, Yin (2009, p.139) stated that in qualitative research the researchers must “identify all reasonable threats to validity and construct repeated comparisons.”

Qualitative methods are suitable for this research because there is no single overarching theory in this area, the author has to interact with the subjects to raise questions and clarify meanings. Section “6.4” will review quantitative methods. Section 6.5 “Research Design” will explain why and how both qualitative and quantitative methods are needed for conducting this research.

6.4 Quantitative Research Methods

Quantitative research methods are used for studying items or events that can be expressed in terms of numbers. It is primarily concerned with the treatment of data that can be collected and analysed with a high degree of objectivity. The underlying assumptions of quantitative research are that subjects are objective, and that research data can be collected and analysed in an objective way. It also assumes that the researcher is physically detached from the sample. This method is used to test theories using statistical techniques. The quantitative research is usually associated with the positivist paradigm, but it can also be applied using the interpretivist paradigm (Saunders et al., 2009; Bryman and Bell, 2011). In the interpretivist paradigm, the research unfolds as data is collected and interpreted. The researcher can use qualitative methods at the start of a study to understand the phenomenon, and use the knowledge thus gained to construct a theory. Then the researcher can use quantitative methods to test the theory on a sample by collected data in an objective and detached manner. The typical quantitative data collection methods are experiments, structured observations, structured interviews, and surveys (Collis and Hussey, 2009). As stated in section 6.2 above, this research will take the results collected through interaction with selected subjects and apply them to a group of Internet users. This requires the use of numbers and objective analysis techniques. This research will use some quantitative methods. Section 6.5 “Research Design” will explain why and how both qualitative and quantitative methods are needed for conducting this research. Section 6.6 “Data Collection Techniques” will review the qualitative and quantitative data collection techniques, and then justify the particular techniques chosen for this research.

One of the advantages of quantitative research is external validity. The results are reflective of the sample, and if the correct sampling procedures have been taken, the results are also reflective of the population. Another advantage is that quantitative research studies are highly replicable. This is because the procedures are highly structured, the environment can be carefully controlled and the subject can be measured accurately in objective terms. Finally, it is suitable for research where the research objectives are straightforward, such as the testing of hypotheses according to established theories (Creswell and Clark, 2007).

There are some disadvantages of quantitative research. Firstly, the method is not suitable for understanding complicated phenomenon that cannot be expressed in terms of variables and numbers. Secondly, if a large sample is used, the researcher cannot interact with the sample to develop a more detailed understanding of the issues involved. Thirdly, the results lack richness and have no subjective meaning. Finally, a large sample of the population, which can be difficult to obtain, is usually required (Remenyi et al., 1998).

Although interpretive studies often use qualitative data, it is important to note that interpretive research can also use quantitative data. Walsham (2006, p.323) stated that “interpretive does not equal qualitative”. Walsham explained that when subjects were involved in qualitative methods, they would be less open or less truthful due to the presence of the researcher, especially when recording device was used. Therefore, it is useful to supplement interviews by other forms of field data like surveys (Walsham, 2006). In particular, the survey is a quantitative method that can be applied in the interpretivist paradigm (Saunders et al., 2009; Bryman and Bell, 2011).

In this research, the disadvantages of quantitative research methods are resolved in the following ways. Since this research is an exploratory study serving as a basis for subsequent research, not for generalising the findings to a population, a large sample size is not needed. The other disadvantages are overcome by the use of a combination of quantitative and qualitative methods. This will be further explained in section 6.5. Through the use of qualitative methods (see section 6.3 above), the author will be able to interact with the subjects in order to seek information that cannot be expressed using numbers.

Table 6.2 Differences between Quantitative and Qualitative Research Methods
Source: Adapted from Roberts and Wallace (2003)

Quantitative	Qualitative
Primary purpose is to determine cause-and-effect relationship	Primary purpose is to describe on-going processes
Precise hypothesis is stated before the start of investigation. Theories govern the purpose of the investigation in a deductive manner.	Hypotheses are developed during the investigation. Questions govern the purpose of the investigation. Theories are developed inductively.
Data are represented and summarized in numerical form.	Data are represented and summarized in narrative or verbal forms.
Reliability and validity are determined through statistical and logical methods.	Reliability and validity are determined through multiple sources of information (triangulation).

6.5 Research Design

This research will use both qualitative and quantitative research methods. This section (6.5) provides the reasons for using a qualitative method first, then a quantitative method, and finally a qualitative method. The next section (6.6) justifies the use of particular data collection technique to be used in the qualitative method and the quantitative method.

The literature review shows that there are no existing definitive models that explain the factors affecting internet users' adoption of OLAs, hence this research is an exploratory study. Qualitative interviews are considered to be suitable for exploratory studies (Hesse-Biber and Leavy, 2011). In qualitative interviews the researcher has the opportunity to probe answers by requesting the subject to explain, or build upon, their responses. In this research qualitative interviews allow the researcher to understand the factors considered by internet users regarding online auctions. The theme questions in the interview will be based on the constructs from the literature review section. The author can confirm his understanding of the subject's answer by paraphrasing the answer or asking the subject to confirm examples found in online auction websites.

Since this research is about Internet users in Hong Kong, a quantitative method is needed to test whether the findings from qualitative methods can be applied to a sample of such users. The typical quantitative data collection methods are experiments, structured observations, structured interviews, and surveys (Collis and Hussey, 2009).

This research aims at finding the perceptions of internet users concerning online auctions. It does not seek to measure frequencies and patterns of behaviour; hence the method of structured observation is not suitable. In structured interviews, the subjects may give socially desirable responses because they believe certain responses are more likely to please the investigator who is collecting the data (Creswell and Clark, 2007). Due to this problem, the results from structured interviews may be biased due to the presence of the interviewer. Therefore, the quantitative method for this research will be a survey without the presence of the interviewer.

One of the limitations of the qualitative research method is the lack of external validity, unless the use of replication logic suggested by Yin (2009) can be applied. Another way to address this limitation is by using multiple data collection. Hesse-Biber and Leavy (2011) and Collis and Hussey (2009, p.85) suggested the use of multiple data collections to triangulate the findings from one data collection. Collis and Hussey (2009) classified triangulation into three types: data triangulation, investigator triangulation, and method triangulation. Data triangulation means data are collected at different times or from different sources. Investigator triangulation means that different investigators independently collect data about the same phenomenon and then compare results. Method triangulation means that more than one method is used to collect the data.

In this research, the author will use qualitative and quantitative methods to achieve both data triangulation and method triangulation. Data triangulation is achieved by the use of two samples: students in focus groups, and other Internet users in the survey. Method triangulation is achieved by the use of two different methods: qualitative interviews followed a quantitative survey. Hesse-Biber and Leavy (2011) stated that the data collected at a particular stage, especially the first stage, could help the design of later stages. In this research, the data collected from the interview stage helped design the survey stage. Similarly, the data collected in the survey stage was used to confirm the data from the interview stage.

6.6 Data Collection Techniques

There are three stages in the data collection process: pilot focus groups, a survey, and a final focus group. The pilot focus groups will guide the design questionnaire to be used in the survey stage. The survey will use a self-administered Internet-based questionnaire. The final focus group is used to obtain more detailed explanations of any special

findings arising from the survey. The following sections will discuss the advantages and disadvantages of interviews and surveys, and explain the reason for choosing the data collection techniques and samples for the three stages of this research.

6.6.1 Interviews

Seidman (1998) defined the interview as a purposeful discussion between two or more people. The interview is considered to be suitable for this research as it involves understanding the perceptions of consumers in Hong Kong. The interview allows the author to discuss in detail with the subjects what aspects of service quality provided by auction web sites are considered important. If the subjects do not fully understand the questions, the interactive nature of the interview allows the author to clarify or restate questions. The author can also ask further questions to obtain more information from the subjects if needed. There are different typologies used to categorise interviews. Based on the level of formality and structure, interviews can be divided into three types: structured interviews, semi-structured interviews, and unstructured or in-depth interviews (Seidman, 1998).

Structured interviews are those based on a predetermined and standardised set of questions. The interviewer should read out the questions exactly as written and in the predetermined order. The interviewer will record the responses on a standardised schedule, usually with pre-coded answers. Semi-structured interviews use a list of themes and questions to be covered. The order of questions can change depending on the flow of the conversation and additional questions may be added. Unstructured interviews are informal and are used to explore in depth a general area in which the researcher is interested. There is no pre-determined list of questions to use. Semi-structured interviews and unstructured interviews are also called qualitative interviews (Bryman and Bell, 2011, p.465) Interviews can be conducted on a one-to-one or on a group basis. The latter is also known as a focus group (Saunders et al., 2009). The focus group is considered to be suitable for this research as explained below.

6.6.2 Focus group

Seidman (1998) defined the focus group as the interviewing of several people on a specific topic or issue. The literature has no consensus on the number of participants in a focus group. Seidman stated that focus groups involve more than one, usually four, interviewees. According to Cooper (2011, p.719), a focus group is a “simultaneous

involvement of a small number of research participants (usually 8 to 10) who interact at the direction of a moderator...”. Saunders et al. (2009) stated that in exploratory studies, the use of focus groups could help to identify the questions that should be used in surveys.

The focus group method has certain advantages over the one-on-one interview. In a one-on-one interview, the interviewee is asked to give reasons for holding a particular view. But in a focus group, the interviewees have the opportunity to probe each other's reasons for holding a certain view. This interaction will cause the subject to further explain or modify a view, or express an opinion that the subject probably would not have thought of without the opportunity of hearing the views of others. The focus group also allows the researcher to study the way in which individuals collectively make sense of a phenomenon and construct meanings around it (Cooper, 2011). For example, if subject A says “I enjoy the excitement in using OLAs,” subject B may disagree and say the bidding process makes one nervous instead of excited. Then subject A can clarify that he feel excited about meeting someone they do not know face-to-face to complete the transaction.

The focus group has certain disadvantages, which the moderator must be aware of. The moderator is the person who runs the focus group session. Firstly, it is not easy for the moderator to achieve optimal control over the discussion. The moderator should encourage the subjects to express their views, but there can be a tendency for the subjects to move away from the research questions. Secondly, the data are difficult to analyse. A large amount of data can be quickly produced within a relatively short time. Effort is required to record and transcribe the data. When manual data recording is used, there is a chance for error to arise. This disadvantage can be overcome by sending the transcript of the focus group's discussion to the subjects for their confirmation (Hair, 2011). Lastly, some individual's views might be suppressed due to other more dominant participants. Some participants may be reluctant to share ideas when speaking in front of others they do not know (Seidman, 1998). The moderator is expected to guide the group but not to be too intrusive (Cooper, 2011).

6.6.3 Focus group for this research

The justification for choosing the focus group for this research is that the subjects in a focus group are likely to have different views towards online auctions. The dynamics between the subjects in a group will cause them to elaborate or modify their views. A

subject's view point about entertainment as a benefit of the online auction may be queried by another subject. This interaction will cause the first subject to explain their answer and the other subjects to think more deeply about the entertainment they feel when using online auctions. As for the disadvantages mentioned above, they can be minimised in two ways. Firstly, the author will try to encourage the less out-spoken members to participate more in the discussion. Secondly, horizontal slicing will be used to minimise the possibility of some participants feeling uncomfortable in expressing themselves in front of a group they are not familiar with. Horizontal slicing means that the sample is made up of those with very similar backgrounds such as job titles (Saunders et al. 2007, p.337). In this research, the members in each focus group are final year students from the same programme at SPEED (The School of Professional Education and Executive Development, Hong Kong Polytechnic University). This is consistent with the horizontal slicing principle as explained above, and the students will not feel uncomfortable in expressing themselves in front of the group.

There is also a possible cultural issue because all the students in the programme are Chinese students. Even with the use of horizontal slicing as mentioned above, the subjects may still be reluctant to share their views in front of a lecturer. Therefore, the subjects will be told that the focus group is not part of their course assessment. Also, the data from the focus groups will be checked for variety of opinions and disagreements to ensure that the cultural issue has not negatively impacted the students' expression of views.

Since this research is mainly exploratory in nature, there is a need to interact with the subjects to understand their perspectives. Saunders et al. (2009) stated the questions used in focus groups should follow a list of themes. In this research, the themes are the perceptions of the interviewers regarding the benefits, transaction costs, risks and service quality of online auctions. The interaction among the subjects will bring out more information about their perceptions of the online auction than one-on-one interviews. The focus group also helped to identify the questions that should be used in the survey stage.

6.6.4 Survey

The survey is a popular and common data collection technique in business and management research. It is a quantitative method that can be applied in the interpretivist paradigm (Saunders et al., 2009; Bryman and Bell, 2011). The data

collected from a survey can suggest possible reasons for particular relationships between variables and be used to produce models of these relationships (Remenyi et al, 1998). In this exploratory research, the use of a survey can achieve both method and data triangulation as explained in section 6.5. The data collection techniques for the survey include questionnaires, structured observations and structured interviews (Saunders et al., 2009). Since this research aims at understanding the perceptions of Internet users, but not measuring behaviour, the structured observations method is not suitable. Due to resource constraints, the questionnaire is chosen over the structured interview. The advantage of the questionnaire is that it can collect responses from a large sample quickly. It is suitable when the questions can be designed so that they will be interpreted the same way by all subjects. The responses are gathered in a standardised way, which means the data will be objective and independent of the research investigator.

6.6.5 Questionnaire

As explained in section 6.6.4 above, the questionnaire is one of the data collection methods for surveys. The questionnaire data collection method is one in which each subject is asked to respond to the same set of questions in a predetermined order. The questionnaire provides an efficient way to collect responses from a large sample (Cooper, 2011). The questionnaire can be used in structured interviews or in face-to-face or telephone surveys. Questionnaires can be classified according to the way they are administered. Self-administered questionnaires are completed by the subjects. They can be administered electronically using the Internet, posted to subjects who return them by post after completion, or delivered by hand to each subject and collected later. Interviewer-administered questionnaires are completed by the interviewer, according to the subject's answers. The interviewer will read the questions one-by-one to the subject, who will give their responses. Finally, telephone-administered questionnaires are used when the subjects are contacted and their answers recorded using the telephone (Seidman, 1998).

The self-administered questionnaire is chosen for the survey stage of this research as it has a number of advantages. Firstly, the subject is not affected by the presence of an interviewer, thus any interview effect on the subject is eliminated. Secondly, it is more convenient for the subjects because they can complete the questionnaire when they want and at their own pace. Thirdly, questionnaires can be distributed in large quantities.

However, the self-administered questionnaire has some disadvantages. Firstly, if the subject has difficulty answering a question, there will be no one to help. Secondly, the questionnaire can only contain a limited number of open questions. Often, the subjects will choose not to answer open questions. Thirdly, the questionnaire should not use a complex structure because subjects may find it difficult to follow (Bryman and Bell, 2011).

The internal validity and reliability of the data collected and the response rate are dependent on the design of the questionnaire. The questions must be understood by the subject in the way intended by the researcher. Similarly, the answers given by the subject must be understood by the researcher in the way intended by the subject (Collis and Hussey, 2009). The potential of obtaining a large sample quickly can be reduced by low response rates. Furthermore, if the completed questionnaires are returned anonymously, it will not be possible to contact a particular subject to follow-up on their answers if there are any omissions or lack of clarity. In this research, the questionnaire was reviewed by an academic and pilot tested to ensure the questions were stated clearly. Some minor changes were made after the academic's review and pilot test.

Creswell and Clark (2007) pointed out two ways in which the reliability of the data collected by questionnaires could be adversely affected. The first is that occasionally the subject gives uninformed responses because they do not have the knowledge or experience so they guess the answer. This is particularly likely if the questionnaire has been incentivised. The second is that sometimes subjects give socially desirable responses because they believe certain responses are more likely to please the investigator collecting the data. Saunders et al. (2009) pointed out that these problems can be minimised by not providing incentives and by administering the questionnaires anonymously.

The self-administered web-based questionnaire technique is chosen because this research aims at finding certain perceptions of Internet users; the web-based questionnaire can ensure that data are collected from Internet users. The use of a questionnaire also allows the researcher to systemically ask all the questions relevant to their research without causing questionnaire fatigue on the part of the researcher. The absence of manual data entry reduces the possibility of data-entry error caused by misunderstanding responses. Finally, the use of questionnaires is compatible with the resources available to the author.

6.7 Samples

The participants in the focus groups were students who use the Internet. The respondents to the online questionnaire were other Internet users.

6.7.1 Sample for focus groups

In this exploratory research, the author had to use qualitative methods to interact with the subjects to understand their perception of factors, as justified in sections 6.5 and 6.6.3. The author would then use the focus group results to construct an online questionnaire. The online questionnaire would be used to collect quantitative data from a wider sample of other Internet users in Hong Kong, as justified in sections 6.5 and 6.6.5. If there were any special findings from the questionnaire data, then the author would use focus groups to obtain an explanation of the issues. According to Cooper (2011, p.167), purposive sampling is used by researchers when they chose subjects “for their unique characteristics or their experience, attitudes or perceptions.” Saunders et al. (2009) stated that purposive sampling means selecting cases that would best enable a researcher to answer the research questions. As this was an exploratory study, the author used non-purposive sampling. This meant that the subjects in the sample were not chosen for their unique characteristics.

Collis and Hussey (2009) suggested that focus groups should be conducted in a location that is safe and convenient for both the researcher and subjects. They also stated that subjects may feel uncomfortable in expressing themselves in front of a group people whom they are not familiar with. Saunders et al. (2007) suggested that horizontal slicing could be used to minimise the possibility of subjects feeling uncomfortable in expressing themselves. Horizontal slicing means the sample is made up of members with very similar backgrounds. In consideration of these two points, the author chose to use non-purposive samples of students from SPEED and conduct the focus groups on campus. Firstly, the campus is convenient for both the students and the author. Secondly, the students were from the same cohort in the same programme, thus the possibility of them feeling uncomfortable in expressing themselves was minimised. Therefore, the participants in the focus groups in the pilot stage and in the final stage were students studying at SPEED. They were all adults and they were all Internet users.

The use of students in electronic commerce research is consistent with Chen and Dubinsky (2003), in which students in a marketing course at a state university were

used as the sample, and Lee (2002), in which the URL address for an online survey was sent via email to university students.

There have been some debates about the validity of using student samples in academic research. Gordon et al. (1986) reviewed 32 articles, mainly in management and psychology academic journals. They found that there was a significant difference between the responses of student and non-student samples. Their conclusion was that studies based on undergraduates had questionable generalizability beyond the undergraduate population. In response to this criticism, Greenberg (1987) argued that the sample in each research was atypical. Greenberg also stated that student samples were suitable for theoretical research. The reason for this was that the use of a homogeneous group helped to reduce extraneous variance to the behaviour in question. Greenberg referred to this as the intentional "blocking" of variables. The use of a student sample could be seen as a strength, not a weakness. Gordon et al. (1987) agreed that the strategy of using a homogeneous group in theoretical studies had its advantages. However, they commented that researchers often use undergraduates as samples based on convenience, cost and accessibility reasons, rather than to "block" variables for theoretical research.

It can be argued that the difference in responses between student and non-student samples stems from the fact that in studies involving students the subjects were required to perform tasks or answer questions they were not familiar with. This was also the reason why Gordon et al. (1987) argued for the external validity of studies using student samples. They stated that students were often required to perform experimental tasks that they were not familiar with, such as "solving problems they did not create, learning syllables they had never seen before, and selecting applicants for hire in non-existent organizations" Gordon et al. (1986, p.191). In summary, if student subjects are involved in tasks that they are capable of and familiar with then they are suitable as research subjects.

In this research, students were considered as suitable subjects because there were no special techniques required except the ability to browse the Internet and the general knowledge of how online auction websites work. In focus group briefings, it was clearly stated that the participants must be internet users with experience of, or basic knowledge of, online auctions.

Usually, more than one focus group is needed for a particular research. Since this was an exploratory study, there was no preset number of focus groups to be conducted. Seidman (1998) pointed out that when further focus groups did not provide new information, the focus groups can be stopped. This phenomenon is called saturation. In this research four focus groups were conducted before the saturation point was reached.

6.7.2 Samples for Questionnaire

As this was an exploratory research, one of the outcomes of the research was a model that could serve as a basis for subsequent research, using literal replication or theoretical replication as proposed by Yin (2009). The main purpose is not to generalise the findings to the population of Hong Kong Internet users. So the author chose to use a non-probabilistic sampling method for the questionnaire data collection. Future research can use different samples to make the model more robust.

Multiple channels were used to collect data for the questionnaire. Firstly, the questionnaire was posted on an online website which offers an online survey service. Secondly, the researcher sent invitations to the fans page and forums related to auction web site such as eBay and Yahoo!Auctions. Thirdly, the researcher also sent out emails to the buyers and sellers whose e-mail addresses he had previously gathered.

6.8 Focus group Design and Questionnaire Design

6.8.1 Focus group Design

The subjects were given an invitation to participate in the focus group. The invitation stated the background of the research and the rights of the subjects. The invitation also stated that the subjects should be Internet users and have basic knowledge about online auctions. The participants were undergraduates from the final year of a single programme. This meant that they all had similar status and experiences. The use of participants with the same background is known as horizontal slicing (Saunders et al. 2007, p.337). Although horizontal slicing can reduce inhibition due to difference in status and experience, it cannot reveal differences in perceptions due to variations in status and experience (Saunders et al., 2009). This limitation will be compensated for by triangulation using the online questionnaire. Naturally forming groups are relaxed and at ease in conversation (Bryman and Bell, 2011). The students enrolled themselves in groups so that each focus group was a naturally forming group.

Collis and Hussey (2009) gave suggestions for the implementation of focus groups. The focus group should be conducted in a location that is safe and convenient to both the researcher and subjects. The questions should be open-ended and long questions such as those composed of two or more questions should be avoided. The interviewer must listen attentively. When necessary, the interviewer should test their understanding by summarising an explanation provided by a subject. Usually, more than one focus group is needed for a particular research.

The interview was divided into four parts. Part one was a briefing that introduced the research by describing the study, and explained the purpose of the interview. Part two was some short questions that asked the subjects how many times they had used OLAs and the items they had bought or sold. Part three formed the main body of the interview. The researcher asked the theme questions (see section “6.5 Research Design”) and allowed the subjects to express their ideas and discuss. Part four was a debriefing session that closed the interview. In this part, the researcher thanked the subjects for their voluntary participation and reassured them of the confidentiality of the data collected in the interview. An example of a theme question and related probe questions is given below.

Theme: In what ways do you think the online auction benefited you?

Probe: Does it help you to find buyers for your items?

Probe: Does it help you to find sellers for items you want to buy?

Probe: Do you enjoy the excitement of bidding and winning in the online auction?

Probe: Does it help you to find items at a low price?

The full list of the theme questions and probe questions is given in Appendix B. In April 2012, students at SPEED were invited to participate in pilot focus groups. The students were contacted through e-mail and were informed that the participation was voluntary. They were told that they could withdraw from the interview at any time without providing reasons. The subjects were assured of the confidentiality of their responses. It was stated that the participants should be internet users and should have either used online auctions or have a general knowledge of online auctions. The dates and number of subjects involved is listed in the table below.

Table 6.3 Focus groups conducted
(Source: Compiled by the student for the thesis)

Date (2012)	Number of Participants	Duration	Location
April 19	2	30 minutes	N1201, West Kowloon Campus
April 23	4	45 minutes	S1201, West Kowloon Campus
April 25	3	40 minutes	S1201, West Kowloon Campus
April 26	6	70 minutes	S1201, West Kowloon Campus

The focus group was conducted in the West Kowloon campus of SPEED. The author acted as the moderator of the focus group interview. After four focus group interviews, saturation was reached because no new information was discovered.

The discussions that took place during the focus group interviews were transcribed. The transcripts were sent back to the subjects who were informed that they should contact the author if they wanted to change the contents of the transcript. No subjects requested to change the transcript.

6.8.2 Questionnaire Design

Cooper (2011) identified some important design characteristics of the self-completion questionnaire. Firstly, there should not be many open questions because closed questions tend to be easier to answer. Secondly, the structure should be simple and easy-to-follow in order to minimise the risk that the subject will fail to follow instructions or even omit questions. Lastly, it should not be too long in order to reduce “subject fatigue”.

The questions in a questionnaire can be divided into three types: opinion, behaviour, and attribute. Opinion questions ask subjects what they feel about something or to what degree they believe something is true or false. Behaviour questions ask subjects about what they did in the past, what they are doing now or what they would do in the future. Attribute questions ask subjects about characteristics such as age, gender, marital status, education, occupation or income (Seidman, 1998).

The questionnaire was divided into three parts. Part 1 introduces the survey and the author. Part 2 consists of attribute questions concerned with the subject’s demographic data. There is a question which asks for the subject’s occupation. This is to check that there is greater diversity among the subjects than at the focus group stage. Part 2 also

contains behaviour questions which ask subjects about their habits regarding the use of online auctions. Part 3 consists of opinion questions which ask subjects about their views on online auctions. These questions are mainly based on the literature review, with certain modifications to make them suitable for the context of online auctions. Some items were added as a result of the findings from the focus groups.

The subjects were asked to provide their answers on a 5-point Likert-scale. The levels were labelled “Strongly Agree”, “Agree”, “Neutral”, “Disagree” and “Strongly Disagree”. The questionnaire was pre-tested using a small group of subjects in a face-to-face setting. The subjects could raise questions about the instructions and meanings of words in the questionnaire. Some minor changes were made to the questionnaire based on this feedback. The questionnaire was then posted on an online survey website. The complete questionnaire can be found in Appendix C.

This research used statistical tests that required interval data. The data collected using Likert scale can be considered as interval data. Hair (2011, p.219) pointed out that “there was empirical evidence that people treat the intervals between the points on a Likert scale as being equal in magnitude”. Cooper and Schindler (2011, p.301) also pointed out that the Likert-scale “produces interval data”.

The following table summarises the questions asked and the constructs that they relate to.

Table 6.4 Questions in the questionnaire

Constructs	Questions	Adopted from previous research of	Remarks
Benefits	Q8 to Q18	Lee (2009), Kim, Chan and Gupta (2007)	Items added for benefits specific to online auctions and based on findings from the pilot focus groups
Time and Effort spent on using auctions	Q19 to Q21	Lee (2009) ; Kim, Chan and Gupta (2007)	
Service Charge	Q22 to Q23	Kim, Chan and Gupta (2007)	
User's own reputation	Q24 to Q25	Nel et al. (2010)	
Risk	Q26 to Q33	Featherman and Pavlou (2003)	Items added based on findings from the pilot focus groups
Efficiency Availability Privacy	Q36 to Q43	Parasuraman et al. (2005) - E-S-QUAL	
Responsiveness Contact	Q44 to Q48	Parasuraman et al. (2005) - E-RecS-QUAL	

Table 6.5 Questions in the questionnaire

Question	Statement
Q1-Q7	Name, Place of Residence, Age, Occupation, Education, Times bought/sold on OLA's
Q8	It enables me to find buyers for the item(s) that I want to sell quickly.
Q9	It enables me to find sellers for the item(s) that I want to buy quickly.
Q10	It helps me to lower my costs in selling items.
Q11	It helps me to lower my costs in buying items.
Q12	It helps me to get information about unusual items.
Q13	It gives me excitement when I bid for items.
Q14	It enables me to compare prices and get more information.
Q15	It is exciting when I have to meet face-to-face with people I don't know before to complete the transaction.
Q16	It enables me to find items that are difficult to find elsewhere.
Q17	I enjoy browsing the great collection of items in an auction web site.
Q18	It enables me to reduce wasting my used items.
Q19	It is not time-consuming to use.
Q20	It is easy to learn.
Q21	It is does not require a lot of effort to use.
Q22	The fee that I have to pay is reasonable.
Q23	I am pleased with the fee I have to pay for using OLA's.
Q24	I don't need to keep my ratings and the feedback I received.
Q25	My ratings and the feedback I received are NOT important to me.
Q26	I am worried that the item I buy does not match the seller's descriptions.
Q27	I am worried that the seller will not deliver the item to me as promised.
Q28	I am worried that the item will be broken during shipping.
Q29	I am worried that I will pay higher than the market price.
Q30	I am worried that I will sell at lower than the market price.
Q31	I am worried that my I will regret buying items that I don't need.
Q32	I am worried that the people around me will disapprove my using of OLA's.
Q33	I am worried that about my personal information when I use OLA's.
Q34	When was the last time you used OLA's?
Q35	Please name the OLA's web site that you normally use.
Q36	The web site makes it easy to get anywhere on the site.
Q37	Information at this site is well organized.
Q38	The web site loads its pages fast.
Q39	This site is well organized.
Q40	This site is always available for business.
Q41	This site launches and runs right away.
Q42	This site does not crash.
Q43	Pages at this site do not freeze after I enter my order information.
Q44	This site provides a telephone number to reach the company.
Q45	This site has customer service representatives available online.
Q46	It offers the ability to speak to a live person if there is a problem.
Q47	It tells me what to do if my transaction is not processed.
Q48	It takes care of problems promptly.

6.9 Research Ethics

Before the research started, permission was obtained from SPEED to use students as respondents in the research. The research was the author's own work. The author administered the questionnaires, conducted focus groups, recorded the responses, transcribed them and processed the results without the help of assistants. The author acted professionally to protect the rights of and maintain the anonymity of respondents.

There was no subject identifier in the data analysis, so all data and results were anonymous and could not be traced to a specific subject.

As the respondents only needed to fill out questionnaires and attend focus groups, there was no harm caused by taking part in the research. The respondents were informed that they had the right to refuse a question or discontinue taking part in the research without giving reasons. The purpose of the research and the rights of the participants were stated in front of the questionnaire and shown to the subjects before interviews. Participation in this survey was anonymous and voluntary. There was no way of identifying how each of these participants answered the survey questions because the survey did not ask the subjects to reveal their personal particulars such as individual name or e-mail. The students were also informed that their participation in the research did not carry any form of credit towards their course completion.

6.10 Limitations

The qualitative and quantitative methods have their own specific advantages and limitations. This research used both methods so that the advantage of the qualitative method compensated for the disadvantage of the quantitative method and vice versa. It can be argued that different data collection techniques could have been used for qualitative and quantitative methods. However, the focus group as a qualitative method and the questionnaire as a quantitative method were considered to be fit for the purpose of this research as explained in section 6.6.

The author used two different samples for the focus groups and the questionnaire: undergraduates were used in the focus groups, while other Internet users were used for the questionnaire. It may seem that the results of these two samples were not compatible. This was not a real limitation because undergraduates were also Internet users. The use of, and approach to, online auctions was the same for graduates as for other ‘real-world’ users. Hence it can be argued that the two samples were actually from a single population. This is consistent with the argument put forward by Greenberg (1987).

The use of convenient non-probabilistic samples means the findings from this research may not reflect the characteristics of the Hong Kong population. However, future researchers can repeat the same research by either replicating the exact conditions and test for similar results (literal replication), or varying some aspects of the conditions and “predict contrast results but for anticipatable reasons (theoretical replication)” Yin (2009, p.52).

6.11 Conclusion

The philosophical framework adopted is the interpretivist paradigm because of the exploratory and progressive nature of this research. The data collection and analysis was completed in three stages. Stage one aimed at finding out users' attitudes to online auctions. It was qualitative in nature with pilot focus groups used for qualitative data collection. The sample for the interviews was students studying at SPEED. The data was analysed using content-analysis by summarising and identifying units that match the theme. Stage two aimed at confirming the results from stage one using a different sample and method. It was quantitative in nature with a self-administered questionnaire used for data collection. The sample for the questionnaire was other Internet users thus increasing the diversity of the respondents. The design of the questionnaire was influenced by the literature review and the content-analysis of the focus group data. Stage three consisted of a final focus group that sought answers to any special findings discovered during the survey stage. The use of different samples and data collection techniques provided data and method triangulation. The author duly considered the ethical issues involved in the data collection and analysis process.

Chapter 7 - Pilot Focus Groups : Data and Outcomes

The pilot focus groups were the first stage of the data collection process in this research. From 19th April 19 to 26th April 2012, four focus groups were conducted. The details of the conduct of the focus groups can be found in section “6.8.1”. This chapter presents an analysis of the data collected in the pilot focus groups. Since this was an exploratory study, the purpose of the pilot focus groups was to apply the dimensions found in the literature review and ascertain if additional constructs were necessary for the questionnaire stage.

The literature review shows that there are four dimensions to customer value in electronic commerce – Benefit, Transaction Cost, Risk and Service Quality (Boyd & Walker, 1990; Kotler, 2000; Sanchez et al., 2006; Grönroos, 1997; Chircu & Mahajan, 2005; Cox & Rich, 1967; Forsythe & Shi, 2003; Lemmink & Mattson, 1997; Sweeney & Soutar, 2001; Chen & Dubinsky, 2003). These four dimensions formed the basis of the objectives of this research as stated in Chapter 5. Therefore, these four dimensions provided the theme questions for the focus groups, and the data will be analysed as guided by these four dimensions.

Saunders et al. (2009) suggested that focus group data could be analysed based on categories derived from a theoretical framework. In this research, there was no one overarching framework, so the categories were the four dimensions of benefit, cost, risk and service quality derived from separate theories in the literature review. Gall et al. (1996) stated the interpretational approach was suitable for analysing data collected by qualitative methods. In the interpretational approach, the researcher would look for patterns within the data to explain their meanings. For example, regarding the dimension of benefits, the author looked for repeating patterns of keywords and phrases like “convenience”, “excitement” and “enjoy”. In the discussions below, participant N in pilot focus group M is denoted by GMPN. For example, G2P3 refers to participant 3 in focus group 2.

7.1 Analysis of Focus Groups Results

Some descriptive statistics concerning the subjects in the pilot focus groups are shown in table 7.2.

Table 7.2 Statistics regarding the subjects in the pilot focus groups

Group	Number
Students	15
Age	2 (20 years old) 10 (21 years old) 2 (22 years old) 0 (23 years old) 0 (24 years old) 1 (25 years old)
Gender	4 (Male) 11 (Female)
Number of times of using OLAs (Online Auctions)	1 (Never) 5 (Less than 10 times) 6 (10-19 times) 2 (20-29 times) 0 (30-39 times) 1 (More than 40 times)
Role (as buyer or seller)	14 (as a buyer) 11 (as a seller)
Online auction website used	12 (Yahoo! Auction) 3 (Others) 0 (eBay)

7.2.1 Demographics

Eleven of the 15 subjects were females. None of them were below 20 years old and 14 of the 15 subjects were between 20 and 22 years old. Only one subject was 25 years old. For the programme from which the sample was taken, there were 271 students. Among them, 204 were females and 67 were males, and 206 of the 271 were between 20 and 22 years old. Therefore, the sample reflected the characteristics of the gender and age distribution of the students in the programme from which the sample was taken.

All the subjects in this sample were full-time students aged between 20 and 24. They were young adults living and studying in Hong Kong. One of the subjects had worked full-time in a travel agent before quitting her job and joining the programme, so her age is the highest in this sample. They were undergraduates in the final year of a bachelor's

degree programme in marketing and public relations. The programme had only one subject related to e-commerce, and the subject did not cover online auctions in detail. Therefore, the subjects in this sample could be regarded as normal Internet users, who were not experts in online auctions.

7.2.2 Online Auction Behaviour

The majority (12 out of 15) of the subjects used Yahoo!Auction as their auction website, while no subjects used eBay. All the subjects said that they knew about eBay, but they chose to use only Yahoo!Auction. All 14 of the online auction users in the sample had been buyers, but only 11 of the users had been sellers. This means that three of the 14 users used online auctions for buying only. The results indicated that most of the participants used the OLA (online auction) in both roles as buyer and seller. Only one participant out of the 15 was not a user, but she declared that she knew about online auctions.

The items bought by the participants through OLAs included books, clothes, fashion accessories such as earrings and handbags, shoes, stationery, and electronic accessories (USB disks, charging stations). Typical items sold were books, handbags, clothes and shoes. The range of items bought and sold indicated that the subjects used OLAs to buy and sell light consumer goods, especially electronic products. There were some exceptions, however. Two subjects bought more expensive items relative to the other subjects. One subject bought a second-hand iPad, and another subject bought a single lens reflective camera, which was brand-new but only a parallel import. This range of items reflected that it was not common for the subjects to buy and sell high-value items or home appliances.

7.2.3 Benefits

The functional benefits of OLAs to users may include finding buyers or sellers quickly, lowering costs in buying or selling items and getting price and other information about products (Turban, King and Lang, 2011; Laudon and Traver, 2013). The non-functional benefits to users may include the entertainment derived from browsing sections dedicated to specific interests and the excitement of bidding and winning (Chaffey et al., 2009, p.40; Schneider, 2013). In the focus groups, the moderator told the subjects that the benefits in regard to research were the benefits due to the use of online auctions, not the benefits of the items that were bought through online auctions.

The responses about the functional benefits were quite consistent among the participants. They agreed that the online auction helped them find buyers or sellers quickly, including the subject who was not a user. The typical responses are listed below:

G2 p3: "I can find buyers for my items quite quickly because there are so many users."

G2 p4: "Yes, when I want to buy an item, there are always some sellers selling them."

The subjects agreed that online auctions could lower the cost of finding buyers and sellers. They mentioned that it was convenient to use OLAs because they can use them at any time and without using any form of transportation. One subject said that she could still use auctions when there was bad weather, which is quite common in Hong Kong.

G3 p1: "Even bad weather like rain storms will not prevent me from using online auctions."

The convenience which the subjects referred to was the reduced time and effort incurred in travelling. The time taken and effort needed to acquire and use some product or service can be considered as non-monetary costs (Grönroos, 1997; Zeithaml, 1988). Therefore, the subjects indicated that OLAs could lower their costs involved in buying/selling items.

They also found the online auction useful to compare prices and gather information about their purchase or sale. Some subjects even used the online auction as a source of price and product information to help their decision-making before using other channels, electronic or otherwise, to buy or sell products.

G3 p3: "It is useful because I can check out the price of some items even if I do not end up buying the item using online auctions."

For non-function benefits of online auctions, there were some differences in opinion, although most of the subjects did indicate some non-functional benefits in one way or another. Some subjects mentioned entertainment and enjoyment.

G4 p1: "There are so many categories and so many items to choose from. It is really interesting."

G2 p2: "You can find items that cannot be found elsewhere!"

G4 p1: "Time really flies when you are browsing the many items on sale."

Some subjects said that they found excitement in the bidding process. However, some subjects felt that the bidding made them feel nervous. These subjects would select to use an automatic bidding "agent". The "agent" was a special part of the auction website in which the user could enter the highest price they were willing to pay for the item, and the price increment to use each time another bidder placed a higher bid. Then the agent would monitor the auction of the item and increase the bid every time another user placed a higher bid. This agent would stop bidding when the auction was closed or when the pre-set highest bid was reached. This difference in opinions regarding bidding is shown by the following two responses.

G2 p1: "Bidding for items is exciting."

G2 p2: "I don't like the bidding. It makes me nervous. I just use the auto-bidding agent provided by the website."

The subjects were also divided in their opinions regarding other non-functional benefits. Being environmentally friendly was mentioned by a subject. This point was only agreed on by the male participant in the same group. Another subject mentioned that he found it exciting because he would not know who he would be dealing with. Again, this point was only agreed on by the male participant in the same group.

G2 p4: "It is more environmentally friendly because I don't have to throw away the things I don't need anymore."

G2 p3: "It is exciting because you don't know who you are going to meet in the next transaction."

The difference in opinion regarding the two benefits above might be due to the difference in gender because the female subjects in the group disagreed on these points. Therefore, these two benefits were identified as possible benefits that should be included in the questionnaire stage.

In summary, the subjects generally had favourable comments about the functional benefits of online auctions, but they were divided in their opinions regarding some non-functional benefits. The non-functional benefits they did not agree on were excitement and being more environmentally friendly. The excitement of meeting strangers to do

face-to-face transactions, and reducing wastage were possible new benefits that were not found in the literature review. These had to be added to the online questionnaire stage to confirm if they were indeed benefits felt by a bigger sample of users.

7.2.4 Transaction Cost

The online auction is a service provided through a website. In a service context, the transaction cost includes the service charge, time and effort for getting and using the service (Teo and Yu, 2005). Since this study was about the value of the service provided by online auctioneers, the moderator told the subjects that the transaction cost involved did not include the price of the product charged by the seller.

Most of the subjects didn't perceive the transaction costs of online auctions as high. The transaction costs they mentioned included the time to search for the right item, time to monitor the auction, service charge by the auctioneer, postal charge, and the effort required to conduct the face-to-face transaction. For monetary costs, except for one respondent, all subjects who used online auctions found that the service charge was reasonable. Only one user and the non-user in the sample considered the service charge of OLAs as being high.

G3 p2: "The service charge is okay. For selling, I only need to pay a little for listing the items. For buying, it is free of charge."

For non-monetary costs, there was no consensus on the time and effort involved. Half of the subjects found it time-consuming and tedious, but at the same time quite enjoyable. The following comment was agreed on by many participants. It showed that when useless or unrelated information was provided by sellers, the user had to spend extra time and effort to search for items listed by sellers who genuinely followed the rules and regulations of the auction website.

G3 p3: "I easily spend an hour or more browsing through an auction website. Some of the items have very interesting and useful information, but some descriptions contain remarks to prompt you to do business with them outside the system. Then I have to skip to another item."

Another non-monetary cost is the user's reputation on the website. In electronic commerce, it has been found that that a merchant's reputation is also a form of asset specificity (Yen et al., 2009; Chen and Dubinsky, 2003). The higher the asset

specificity, the less likely that asset can be used elsewhere. In online auctions, the user's reputation, in the form of ratings and feedback received, can be a form of asset specificity. The subjects had two extreme opinions regarding their reputation. Some subjects considered their reputation as an asset, but some subjects said they would perform some opportunistic behaviour even if it would affect their rating.

G3 p3: "My reputation is very important to me because I rely on it to attract bidders."

G1 p2: "I don't care too much about my reputation because I can always buy and sell using another account name. Many users just look at the price any way."

The implication of users' opportunistic behaviour is that these users are less likely to be loyal users because they don't plan to use the website long term. The parties who are affected by opportunistic behaviour will have unfavourable impressions about the website and may even stop using the particular auction website.

The non-user subject thought that auction websites were not easy to use and costly.

G1 p1: "These websites are not as easy to use as social networking sites like Facebook. I also don't feel like paying a charge just for listing my items on an auction website."

In summary, the subjects had favourable opinions about the monetary transaction costs, but they were quite divided in their opinions about non-monetary transaction costs in terms of time, effort and their own reputation in online auctions.

7.2.5 Risks

The literature review shows that the risks that are relevant to electronic commerce were financial risk, psychological risk, social risk and privacy risk (Miyazaki and Fernandez, 2001; Lee, 2009; Almousa, 2011).

Financial risk is the possible financial loss due to fraud or overspending (Jacoby and Kaplan, 1972). All the subjects worried that the items may not match the descriptions in the listing. This worry caused many subjects to choose to pay in cash when they met with the seller face to face.

G2 p1: "I protect myself by insisting on doing transactions face to face, so that I can examine the product carefully before I pay. If the product is inferior, I will just cancel the transaction or ask for a price reduction on the spot."

The subjects also worried if the product would be damaged during shipping, or if the product would be delivered or not.

G3 p3: "I have received a broken item in the past. The seller said it must have been broken in the mail. The seller also sent me a photo of the product before the parcel was sealed."

The above worries about the financial risk were also reflected in the range of items that the subjects bought and sold in online auctions. The items bought or sold were small, relatively inexpensive items. When high-value products were purchased, the subjects only bought used ones or parallel imports.

Psychological risk refers to the frustration of not achieving a buying goal (Jacoby and Kaplan, 1972). In online auctions, this means the frustration felt by the buyer or seller when the transaction cannot be completed even after the auction is successfully closed with a winner. Some subjects felt frustrated because the seller cancelled the transaction.

G3 p2: "Sometimes the seller may just cancel the face-to-face meeting with very short or no notice at all."

This confirms the discussion in section "7.2.4 Transaction Cost" that if some users behave opportunistically, the other party will have an unfavourable impression of OLAs.

Psychological risk also occurs when the buyer tries to win a bid because of the bidding frenzy created by the competition (Holt & Sherman 1994). This means that the buyer may buy an item because of the excitement of the bidding, but afterwards, regret having bought the item. Three subjects said that they had the experience of regretting their purchase. All the other subjects said they had not experienced any regrets about the decisions they had made in online auctions.

G2 p4: "The product looked great because there were so many bids. I was so eager to win the product before the auction closed that I didn't

really review the product descriptions and my needs. I felt stupid after winning the bid. I didn't really need the product."

With regard to social risk, all the subjects were not worried about whether their friends and families would disapprove of their use of online auctions. When the subjects were asked if they would try not to tell other people that they bought some things from online auctions, they said that they would not mind telling people. Two subjects did not have their own accounts, and asked their family members to do the bidding on their behalf.

G2 p2: "I don't mind my friends and families knowing about my use of online auctions. In fact, I asked my brother to bid on my behalf."

With regard to privacy risk, the subjects were not concerned about their privacy. They indicated that there was not much private information required when registering as a user.

G4 p4: "The auction website only requires me to enter some basic information such as e-mail address and mobile phone number. They don't need me to provide any documents so I choose to use a name that is not my real name."

Some subjects explained that more information such as credit card numbers was only needed if they chose to use them as payment methods. These subjects said that they trusted the auctioneer to keep their registration data secure.

In summary, the users were worried that descriptions about the items were not true, and that the items would not be delivered. Some subjects had regretted their purchases and experienced some opportunistic behaviour taken by the other party. No subjects expressed concerns about their privacy or people around them disapproving of the use of OLAs.

7.2.6 Service quality

In the focus groups, the moderator explained to the subjects that service quality in this research meant the quality of the service provided by the auction website, not the service quality of the seller of the item(s). When the subjects were first asked about how they felt about the service quality of the auctioneer they were using, none of them expressed any dissatisfaction.

G3 p3: "I am very satisfied with the auction website."

G4 p6: "I have never encountered any problems that are directly related to the website itself."

In order to obtain specific answers about certain aspects of online service quality, the moderator invited the subjects to give their opinions on the efficiency, system availability and privacy of the website. These questions were based on E-S-QUAL (Parasuraman et al., 2005).

With regard to efficiency, the subjects agreed that the online auction website they were using was efficient because they can move to different parts of the website easily and search for items they want quickly. On system availability, they said that they never experienced any server crash or webpage that could not be loaded.

G3 p2: "The auction website is easy to navigate. The categories are labelled well. There is a search engine. I can search efficiently using brand names or product features. The advanced search feature has a function for finding \$1 bids."

G4 p5: "I never encounter a server crash. The website is always available when I need it."

With regard to privacy, the subjects indicated that they believed that the auction website protected their personal information well. This issue has already been discussed in section "7.2.5 Risks" under the topic of "Privacy Risk".

Then the moderator asked questions regarding responsiveness, compensation and contact, as per the E-RecS-QUAL (Parasuraman et al., 2005). The moderator explained that these referred to the service that the website provided to help users to recover from problems encountered when using the website. The subjects indicated that they had no experience of these aspects because they had never had any problems that were related to the auctioneer directly.

G3 p4: "I have never needed to call my auctioneer because the problems were entirely with the seller. I only need to contact the seller or buyer to raise some questions or arrange the transaction."

In summary, the users were satisfied with the service quality of the auction website which they had been using. The subjects also indicated that they had not run into problems that required them to contact the auctioneer to ask for assistance.

7.2 Application of the Results of the Focus Groups

The results of the pilot focus groups were used to fine-tune the design of the questionnaire. The changes were the additions of items to the “Benefits” section and the “Risks” section. With regard to benefits, one of the respondents indicated the following, with which some male subjects agreed.

G2 p1: “It is exciting for me to meet with someone face to face in order to complete the transaction.”

A review of existing work related to excitement in auctions (Wolfenbarger, 2001; Hou & Elliott 2010) showed that this was a potentially new construct. Therefore, the corresponding question added to the questionnaire was Q15, as shown below:

“It is exciting when I have to meet face to face with people I don’t know to complete the transaction.”

Another benefit that was mentioned in the focus group was being environmentally friendly. In the pilot focus groups, one subject mentioned that using OLAs is environmentally friendly and helped him make some extra money. A few subjects also agreed with his statement.

G2 p4: “I can sell my used items on auctions, rather than just throw them away. It’s environmentally friendly.”

Again, this construct was not found in previous research related to online auctions, so it was added to the questionnaire. The corresponding question was added to the questionnaire as Q18 as shown below:

“OLA enables me to reduce wasting my used items.”

Some constructs were modified from their original form because they were not phrased specifically for online auctions. These are the questions about risks from Featherman and Pavlou (2003). They were used in a questionnaire to investigate the role of perceived risks in the adoption of e-services. Based on the findings about risk from the pilot focus group, they were modified to the current version as in Q26 to Q32 in

Appendix C. The adoption was mainly changing the wordings to suit the OLA context, and breaking up one question into two questions – one about buying and one about selling. Table 7.3 shows how questionnaire items from Featherman and Pavlou (2003) were adopted.

Table 7.3 Adoption of questionnaire items from Featherman and Pavlou (2003) for this research

(XXXX denotes trial demonstration software used for the research)

Featherman and Pavlou (2003)	This Research
What are the chances that you stand to lose money if you use the XXXX?	<ul style="list-style-type: none"> • I am worried that the item I buy does not match the seller's description. • I am worried that the seller will not deliver the item to me as promised.
My signing up for and using an XXXX would lead to a financial loss for me.	<ul style="list-style-type: none"> • I am worried that I will pay higher than the market price. • I am worried that I will sell at lower than the market price.
What are the chances that using the XXXX will negatively affect the way others think of you?	<ul style="list-style-type: none"> • I am worried that the people around me will disapprove of my using OLAs.
My signing up for and using an XXXX would lead to a loss of privacy for me because my personal information would be used without my knowledge.	<ul style="list-style-type: none"> • I am worried about my personal information when I use OLAs.

After the questionnaire was designed based on the results from the pilot focus group, it was reviewed by an academic and then pilot tested with a group of students to ensure that the questions were stated clearly and instructions could be understood in the same way by all respondents. As a result of the review and pilot testing, some minor changes in grammar and choice of words were made. The link to the online self-administered questionnaire was posted on an online survey website, as well as the online discussion forum of Discuss.com.hk. The author also sent e-mail containing the link to the questionnaire to buyers and sellers with whom the author had dealt with previously.

7.3 Security and Data Protection

The results of the focus groups used to fine-tune the design of the focus groups revealed consistency with the constructs found in the literature review. All computer files used in this research were password protected. Back-up copies were stored along with the

study's data. The subjects in the focus groups were identified by a participant number, enabling checking with participants should the need arise. A list of the participant numbers and their names were kept by the researcher and stored with the study's data. The list is being kept confidentially by the author and will be destroyed three years after the study is completed.

7.4 Summary of Pilot Focus Groups

In summary, the pilot focus groups results were consistent with the dimensions found from the literature review. With regard to benefits, the subjects had favourable opinions, although they were divided in their opinions regarding excitement and OLAs being more environmentally friendly. With regard to costs, the subjects agreed that the service charge was reasonable, but they had different views on the time and effort spent in using online auctions, and their reputation as a long-term asset. With regard to risks, the subjects all indicated worries concerning financial risk. Only some subjects regretted their purchases. No subjects expressed concerns about their privacy or people around them disapproving of their use of OLAs. With regard to service quality, the users were satisfied with the service quality of the auction website which they had been using. No subjects had run into problems that required them to contact the auctioneer to ask for assistance.

The results of the pilot focus groups were used to design the questionnaire. Two potentially new constructs regarding benefits were identified from the pilot focus groups. The first new construct was the excitement in meeting with strangers to complete the transaction. The second new construct was the reduction in wasting used items.

Chapter 8 - Analysis

This chapter analyses the data collected from the questionnaire and the final focus group. The questionnaire was hosted on an online survey website between 23rd Sept. and 3rd Nov. 2012. The website collected 152 usable responses. The questionnaire findings discovered two issues, so the final focus group was carried out on 26th November to seek explanations to these.

This section will begin with a summary of the demographics and usage characteristics of the respondents in the survey. Then, the findings will be discussed in relation to the four research questions as stated in “Literature Synthesis”. Finally, the author will discuss the results of the final focus group.

8.1 Analysis of Online Questionnaire Data

8.1.1 Demographics and Usage

A summary of the demographics of the respondents is shown in table 8.1. All of the respondents were Hong Kong residents, so this fits the scope of studying the factors that are important to internet users in Hong Kong. In the sample, there were 83 (55%) males and 69 (45%) females. According to the census conducted in 2011 in Hong Kong, there were 47% males and 53% females (Hong Kong Census and Statistics Department, 2011). It is noted that the gender distribution in the sample was similar to that of the Hong Kong population.

In the questionnaire, the respondents entered their age in numbers, instead of choosing from pre-defined ranges. For analysis purposes, the respondents were grouped into three ordinal groups: Late-teens (15-19), Young adults (20-25), and Adults (26 or above). It can be argued that the respondents could have been grouped differently, for example, a group for every 5 years in age. However, as Table D.1 in the appendix shows, there were only less than 23% of respondents are above the age of 26. If more groups of above age 26 were formed, many groups would have 5 respondents or less. This would prevent the use of most statistical tests (Saunders et al. 2009). The present grouping allowed for an even spread of samples in the three groups (n=48, 49, 55) for subsequent statistical analysis. The complete age frequency distribution and histogram are in appendix D.

In terms of occupation, there were 74 (49%) full-time students, 38 (25%) workers in the finance/banking industry, and 7 (%) in the education sector. This was an improvement

in diversity when compared with the pilot focus groups, in which 100% of the participants were full-time students.

For education level, 75 (49%) were at the bachelor level. This was expected because the author invited some full-time students who were studying at the final year of a bachelor's degree to fill-out the questionnaires.

Table 8.1.1a Demographics of Respondents

Group	Values	Count	% of Response
Residence	Hong Kong	152	100%
Gender	Male	83	55%
	Female	69	45%
Age	Late-teens (16 - 19)	48	31.6%
	Young Adults (20 - 25)	49	32.2%
	Adults (26 or older)	55	36.2%
Occupation	Full-time students	74	48.7%
	Finance/Banking	38	25.0%
	Education	7	4.6%
	Manufacturing	5	3.3%
	Others`	28	18.4%
Level of Education	Secondary	52	34.2%
	Post-Secondary	4	2.6%
	Higher Diploma/Associate Degree	14	9.2%
	Bachelor	75	49.3%
	Master	5	3.3%
	Doctor	2	1.4%

A summary of the respondents' usage of OLAs is shown in Table 8.2. Out of the 152 valid responses, 91(60%) were users, and 61(40%) were non-users. Among the users, there were 91 used OLAs for buying, and 55 used OLAs for selling. The users who used OLAs for selling also used it for buying. This means that the sample of this research consisted of respondents who were “buy-only” users, “buy-and-sell” users, and non-users.

Table 8.1.1b shows that most of the users were “light” users, which means they used the online auctions from 1 to 5 times for buying (48%) or selling (62%). Over half of these “light” users OLAs for buying (61%) and selling (78%) within one year. There were some users who used online auctions quite heavily. Eighteen users bought more than 30 times, while five users sold more than 30 times.

Table 8.1.1b Usage Habits of Online Auctions (Number of Users=91)

Group	Values	Count	% of Group
Role	Buyers	91	60%
	Sellers*	55	36%
	Non-Users	61	40%
	* The sellers were also buyers		
Times the user has bought or tried to buy using OLAs	1 to 4 times	44	48%
	5 to 9 times	12	13%
	10 to 14 times	9	10%
	15 to 19 times	3	3%
	20 to 24 times	4	4%
	25 to 29 times	1	1%
	30 times or more	18	20%
Times the user has sold or tried to sell using OLAs	1 to 4 times	34	62%
	5 to 9 times	11	20%
	10 to 14 times	3	5%
	15 to 19 times	1	2%
	20 to 24 times	1	2%
	25 to 29 times	0	0%
	30 times or more	5	9%
The last time the user used OLAs	Less than 3 months ago	40	48%
	Between 3 months and 6 months	15	18%
	Between 6 months and 1 year	7	8%
	More than 1 year ago	22	26%
Normal Web Site	Yahoo!Auction	65	77%
	EBay	7	8%
	Others	12	15%
Tried to get live support from the web site	Never	53	63%
	Tried to make a phone call	8	10%
	Tried to get online chat	17	20%
	Tried both phone calls & online chat	6	7%

Table 8.1.1b shows that how recent the respondents had used OLAs. Nearly half (48%) of the users used OLAs less than three months ago, about one-fifth (18%) used it more than 3 months but less than 6 months ago, about one-tenth (8%) used it more than 6 months ago but less than 1 year ago, and about one-quarter (26%) used it more than 1 year ago. Since about 74% of the respondents used OLAs within one year ago, their responses could be regarded as timely for the research.

Over three quarters (77%) of the users indicated that Yahoo!Auction was their normal online auction web site. Less than one-tenth (8%) of the respondents used eBay normally. This is consistent with the pilot study in which 12 out of the 15 users used Yahoo!Auction as their normal auction web site. This suggests that Yahoo!Auction may be the main online auction web site used by Internet users in Hong Kong. It also means the findings in this research are limited to the respondent's perceptions about using Yahoo!Auction only.

To facilitate the analysis between different usage habits, the buyers of OLAs were classified into the ordinal groups of “Light Buyer”, “Medium Buyer” and “Heavy Buyer” according to the number they had used OLAs. The sellers were classified in the same way. Table 8.1.1c shows how the users were classified.

Table 8.1.1c Classification of users according their usage of online auctions.

Name	Meaning
Non-Buyer (seller)	Never bought (sold) using OLAs
Light Buyer (seller)	Bought (sold) for 1 to 9 times
Medium Buyer (seller)	Bought (sold) for 10 to 19 times
Heavy Buyer (seller)	Bought (sold) for 20 times or more

Table 8.1.1d shows the number of users in each group according to the classification scheme. For selling, it was found that 97(63.8%) were non-sellers, 45(29.6%) were light sellers, 4(2.6%) were medium sellers, and 6(3.9%) were heavy sellers. For buying, it was found that 61(40.1%) were non-buyers, 56(36.8%) were light buyers, 12(7.9%) were medium buyers, and 23(15.1%) were heavy buyers. The numbers show if the auctioneer can find out how to encourage the light buyers/sellers to become medium or heavy users, the auctioneer will see a substantial improvement in its business.

Table 8.1.1d Classified of users according to how many times they used OLAs.

	Frequency	Percent
Non-buyer	61	40.1
Light Buyer	56	36.8
Medium Buyer	12	7.9
Heavy Buyer	23	15.1
Total	152	100.0

	Frequency	Percent
Non-Seller	97	63.8
Light Seller	45	29.6
Medium Seller	4	2.6
Heavy Seller	6	3.9
Total	152	100.0

8.1.2 The Tests used for Analysis – One Sample t-test, Kruskal-Wallis

In the questionnaire, the scores given by the respondents were used to determine if the respondents agreed to a certain construct. The opinions of the respondents were measured on a Likert scale of five as shown below:

1 = “Strong Agree”, 2 = “Agree”, 3 = Neutral, 4 = Disagree, 5 = Strongly Disagree.

Since the middle point of this 5-point scale was 3, if a construct received a mean response of 3, it meant the respondents neither agree or disagree to the construct. If a

construct received a mean response of lower than 3, it meant that the respondents agree to the statement representing the construct. The data collected using Likert scale can be considered as interval data (Hair, 2011; Cooper and Schindler, 2011). This means statistical tests can must operate on interval data can be used in this research for analysis. The one-sample t-test is often used to estimate the possibility of a sample mean is really significantly different from a specific value (Hair, 2011). A construct is considered as significant if there is a less than 5% ($p < 0.05$) probability in making an error by assuming that the mean response of the construct is really different from a specified value, not because of random errors. Hair (2011) suggested that in such a 5-point Likert scale, the value of 2.5 could be chosen as the threshold in a one-sample t-test to determine if the respondents agreed to the construct or not. Therefore, it was decided that a construct has to receive a mean response of “2.5” or lower to indicate that the respondents agree to that construct.

Furthermore, to determine whether there are differences among the groups of the respondents due to gender, age, and their roles as buyer or seller, some statistical tests were performed. The Kolmogorov-Smirnov and Shapiro-Wilk tests in SPSS showed that the data was not normally distributed. This means parametric tests, such as the ANOVA, could not be used. The Kruskal-Wallis test, which is a non-parametric test, was chosen for this research. This test is suitable for this set of data because it ranks all the observed scores in the sample in each group. If real underlying differences among the groups exist, then scores from the various groups will be systematically clustered in the entire rank order (Carver & Nash, 2012). Since only the ranks are used instead of the actual values, this test does not require the underlying distribution of the data to be a normal distribution.

8.1.3 Research Question 1: Perceived benefits

The literature review showed that the perceived benefits of using OLA might include liquidity, entertainment, price transparency, and excitement. The variables related to these benefits and their means are listed in Table 8.1.3a. The following sections will examine these scores using the one sample t-test and discuss their meanings and implications. Finally, the Kruskal-Wallis test will be used to examine if there were any significant difference among the groups in the respondents.

Table 8.1.3a Means scores of benefits (N=84)

Benefits: measured on a 5-point Likert scale, in which 1=Strongly Agree, 5 = Strongly Disagree	Mean	Std. Dev.	Sig ¹
Find buyers for the item(s) that I want to sell quickly.	2.40	.990	.478 ²
Find sellers for the item(s) that I want to buy quickly.	2.24	.884	.007
Lower my costs in selling items.	2.22	.790	.016
Lower my costs in buying items.	2.28	.802	.013
Get information about unusual items.	2.17	.656	.000
Gives me excitement when I bid for items.	2.52	.971	.827 ²
Compare prices and get more information.	2.05	.727	.000
Exciting to meet face-to-face with people I don't know.	2.93	.889	.000
Find items that are difficult to find elsewhere.	2.17	.820	.000
Enjoy browsing the great collection of items.	2.30	.861	.034
Reduce wasting my used items.	2.18	.825	.009

Notes:

1 – Significance level of the mean in the One-Sample T-Test different from 2.5

2 - Not significantly different from the value of 2.5

Liquidity

Liquidity depends on the number of participants and the number of bids/asks in that market (Giot & Grammig, 2006). A high liquidity means the buyer will be able to find sellers quickly without incurring high costs and vice versa. Table 8.1.3a shows the respondents agreed that OLAs helped them to find sellers quickly ($p = 0.007$) and that OLAs lowered their costs in buying ($p = 0.013$). However, the respondents did not agree that OLAs helped them to find buyers quickly ($p=0.100$) even though they agreed that OLAs lowered their costs in selling ($p = 0.016$).

If auctioneers can convince Internet users that their web sites can find buyers quickly, then Internet users are likely to use their service because they already perceived the cost of selling items in OLAs is low. The implication is that the auctioneer can highlight to the potential sellers that there is a large demand for goods on their web sites. This can be done by setting up a “Wanted” section in the web site, or by showing the number of successfully closed auctions per month. This will help to convince the potential users that online auction web sites can find buyers quickly.

Entertainment

In auctions, entertainment can arise due to the frequent change of products, products being unusual, unique or collectible (Wolfenbarger, 2001). Table 8.1.3a shows that the respondents agreed that OLAs help them get information about unusual items ($p = 0.000$) and that they enjoyed browsing the great collection of items ($p = 0.034$). Table 8.1.3c shows that buyers and sellers showed no significant difference in the degree of enjoyment. A possible explanation is that in this research, all buyers were also sellers.

The implication is that the auctioneer can consider partnering with or even acquiring speciality auction web sites. This kind of strategic acquisition not only increases the clientele of the auctioneer, but also increases the perceived entertainment in using the web site by including unusual, unique or collectible items. Examples of these web sites include Cigarbid.com and Golfbidder.co.uk. Some auctioneers have already used acquisition to grow their business. For example, eBay acquired CARad.com, which specialised in online auction of cars, on January 31, 2003 (eBay, 2003). The website is now operating as motors.ebay.com (eBay.com, 2013). The items in this auction website include new and used everyday cars, as well as collector cars, motorcycles, auto parts and accessories.

Excitement

The excitement during online auctions is comparable to those found in gambling (Hou & Elliott 2010). In addition, the result from the pilot study shows that it was possible that users might derive excitement when they met with strangers in person to complete transactions. However, Table 8.1.3a shows that the respondents did not agree that “OLAs gave them excitement when they bid for items”. The implication is that the current approach of offering an optional automated bidding mechanism is suitable.

Price transparency

The online auction offers price transparency because the opening price, payment terms, shipping charges and bidding history are known to all participants. In addition, the seller will answer questions raised by potential buyers about the item (Jank & Shmueli, 2010; Charki, Josserand & Charki, 2011). Table 8.1.3a shows among all the benefits, the respondents have the most favourable attitude towards the benefit of price transparency. The implication is that the auctioneer must ensure that the price and related information given by sellers must be accurate and not deceiving. The final focus group revealed that the respondents reacted very strongly when some sellers staged false “one-dollar” bids. This issue will be discussed again in the section “Analysis of the Focus group”.

Other Benefits

The pilot study showed that two other benefits that might be important to users are “It enables me to find items that are difficult to find elsewhere” and “It enables me to reduce wasting my used items”. Table 8.1.3a shows the mean score of these two benefits are 2.17 and 2.18 ($p = 0.000$ and 0.009) respectively. These values suggest that the respondents had very favourable attitude towards these two benefits. The

implication is that the auctioneer must try to offer good search facilities for users to search for items. An review of the Yahoo!Auction and eBay search function showed that both web sites did not have collaborative filtering capabilities. According to Chaffey et al. (2009), collaborative filtering means that customers interests are compared with those of other customers in the merchant's database. Then the computer will make recommendations and delivery information accordingly. An example of this technology can be found on the Amazon web site, in the form of "Customer who bought book X also bought CDs Y and Z" (Chaffey et al., 2009) . For auctioneer, they can compare the search criteria specified by a customer with those of other customers who searched using similar criteria and subsequently purchased some items. Then at the end of the search results page, the auctioneer can recommend items that the user may also want to bid. Another possibility is for auctioneers to offer a "Wanted" section. This would allow buyers to tell the whole community that they are looking for certain items.

Difference In Perceive Benefits Between Different User Groups

Since the Internet has the ability to personalise services and communications to meet the characteristics of different segments, it is necessary to check if there are significant differences between the different groups of customers. The Krusal-Wallis test was run to see whether there were differences among the respondents. The results are summared in Table 8.1.3b.

Table 8.1.3b Krusal-Walllis test - Perceived benefits among different user groups

Perceived Benefits	Significance Level of Differences Among the subgroups of		
	Gender ²	Age ³	Role ⁴
Find buyers for the item(s) that I want to sell quickly.	.511	.221	N.A. ⁵
Find sellers for the item(s) that I want to buy quickly.	.418	.455	.121
Lower my costs in selling items.	.784	.769	N.A. ⁵
Lower my costs in buying items.	.646	.351	.135
Get information about unusual items.	.295	.138	.675
Gives me excitement when I bid for items.	.097	.175	.465
Compare prices and get more information.	.795	.909	.359
<i>Exciting to meet face-to-face with people I don't know.</i>	<i>.049 ¹</i>	<i>.042 ¹</i>	.402
Find items that are difficult to find elsewhere.	.285	.811	.848
Enjoy browsing the great collection of items.	.544	.362	.908
Reduce wasting my used items.	.446	.223	N.A. ⁵

Notes: 1 - These items are significant at the 0.05 level

2 – Subgroups are Male, Female

3 – Subgroups are Late-teen, Young-adult, Adult

4 – Subgroups are buyer, seller

5 - There is only one group (seller) for the benefit, so no comparisons are possible.

Difference In Perceived Benefits due to Gender, Age and User's Role

Table 8.1.3b shows that there are no statistically significant differences in the respondent's perception of benefits due to their gender, age and their roles as buyers or sellers. The only exception is the perceived benefit of "It is exciting to meet face-to-face with people I don't know before to complete the transaction". However, the difference among the subgroups in gender and age are only marginally significant ($p=0.049$ and 0.042 respectively).

The implication is that the small difference in the perceived benefit of excitement caused by meeting with strangers due to difference in gender does not justify specific efforts by the auctioneer to customise communications in this area.

Difference In Perceived Benefits between users and non-users

Table 8.1.3c shows that the non-user were quite neutral about the benefits of "finding buyers quickly", "finding sellers quickly" and "lowering costs in selling items". They disagreed that OLAs will lower their costs in buying items. It is noted that the non-users' perception about benefit of "finding buyers quickly" is not significantly different from users. However, their perceptions about "finding sellers quickly" and lowering costs in buying and selling are significantly more negative than the users. The implication of this finding is that online auctioneers can try to attract non-users to become sellers first. This can be achieved by offering them with welcoming offers, such as no charge for the first three item listings.

Table 8.1.3c Means scores of benefits by non-users

Benefits: measured on a 5-point Likert scale, in which 1=Strongly Agree, 5 = Strongly Disagree	Non- User Means (N=61)	Sig ¹ (Different from 2.5)	User Means	Sig ³ (Difference between Users and Non-Users)
Find buyers for the item(s) that I want to sell quickly.	2.51	.927 ²	2.40	.354 ⁴
Find sellers for the item(s) that I want to buy quickly.	2.49	.927 ²	2.24	.021
Lower my costs in selling items.	2.66	.089 ²	2.22	.001
Lower my costs in buying items.	2.79	.002	2.28	.000

Notes:

1 – Significance level of the mean in the One-Sample T-Test different from 2.5

2 - These items are non-significantly different from the value of 2.5 in the one-sample t-test.

3 – This is the significant level of the results from the Kruskal-Wallis test.

4 – This item is not significant different between the users and non-users in the Kruskal-Wallis test.

8.1.4 Research Question 2: Perceived costs

The literature review showed that the perceived costs of using OLA might include time, effort and service charge and the user's reputation. The variables related to these costs and their means are listed in Table 8.1.4a.

Table 8.1.4a Means scores of costs (N=84)

Costs: measured on a 5-point Likert scale, in which 1=Strongly Agree, 5 = Strongly Disagree	Mean	Std. Dev.	Sig. Level ¹
It is not time-consuming to use.	2.55	.962	.651 ²
It is easy to learn.	2.13	.741	.000
It is does not require a lot of effort to use.	2.46	.783	.677 ²
The fee that I have to pay is reasonable.	2.30	.788	.021
I am pleased with the fee I have to pay for using OLAs.	2.52	.799	.785 ²
I don't need to keep my ratings and the feedback I received.	2.93	.916	.000
My ratings and the feedback I received are NOT important to me.	3.43	.935	.000

Notes:

1 – Significance level of the mean in the One-Sample T-Test different from 2.5

2 - Not significantly different from the value of 2.5

Non-Monetary Cost - Time and Effort

Time and effort forms part of the perceived ease of use in using information systems as depicted in the TAM (Davis, 1989). The was adopted by Lee (2009) and Kim, Chan & Gupta (2007) in e-commerce situations. Table 8.1.4a shows the respondents found that using online auctions required a lot of time and effort, but learning to use them was easy. When this result is considered together with the findings about the service quality (Section 8.1.6), and Entertainment (Section 8.1.3), the author spotted an apparent contradiction. This is because the respondents agreed that the online web sites were well organised and easy to navigate (Section 8.1.6). Also, they agreed that they enjoyed browsing the auction web sites (Section 8.1.3). Based on these findings, one possible

explanation to the contradiction is that the respondents enjoyed browsing the items in OLAs and therefore they spent a lot of time on online auctions. So the time is spent on the enjoyment of the browsing process, instead of experiencing great difficulty in locating the items or learning to use them. There is, however, a need to find out other possibilities by using a final focus group. This will be discussed in Section 8.2 “Analysis of Focus group Results”.

Non-Monetary Cost - User's Reputation

The user's reputation as a non-monetary cost in using e-commerce is an adoption from by TCE (Transaction Cost Economics) by Nel et al (2010). The user's reputation can be viewed as an asset which is specific to a particular auction web site. TCE states that site specificity is one type of asset specificity (Williamson, 1981, p.555). When asset specificity is low, buyers “can easily turn to alternative sources and suppliers can sell output intended for one buyer to other buyers without difficulty” (Williamson, 1981, p.555). Table 8.1.4a and Table 8.1.4b show that the respondents disagreed that they didn't need to keep the ratings and feedback they received (mean score=2.93, $p = 0.000$) and they disagreed that the ratings and feedback they received were not important to them (mean score=3.43, $p = 0.000$). The results indicate that the users do agree that their reputation is a form of site specificity. TCE (Williamson, 1981) states that a party would be less likely to enter into the transaction (i.e. using a particular website) in the first place to avoid lock-in, in this case, due to site specificity.

The implication is that the auctioneer should try to encourage “light users” to use the web site more. This can be done by providing special welcome offers to reduce the cost. When the user becomes “medium” or “heavy” users, the asset specificity of their user reputation will increase, so will their loyalty. This is because the feedback and ratings they receive are specific to the auctioneer's web site only.

Monetary Cost - Service charge

The service charge involved in using e-commerce is an adoption of the TAM in a non-organisation context by Kim, Chan & Gupta (2007). If the user perceived that the monetary cost is not high in using a service, it is more likely the user will adopt the service. Table 8.1.4a shows that the respondents agreed that the fee charged by auctioneers is reasonable (mean = 2.30, $p = 0.021$), but the respondents did not agree that they were pleased with the fee they had to pay (mean = 2.52, $p = 0.785$).

This issue was explored further in the final focus group. Some respondents in the focus group interview commented that they were willing to pay for the listing fee and other services, such as getting top positions in search results or getting highlighted by using different colours or special effect such as blinking. The reason was the fee for each service was quite small. However, when they received the monthly credit card statement, they found that they had spent quite a lot in the using online auctions. The implication for auctioneers is that they can introduce some kind of service package so that the users will get some discounts as the volume increases.

Difference in Perceived Cost due to Gender, Age and User's Role

Table 8.1.4b Difference in perceived costs between groups

Perceived Costs	Significance Level of Differences Among the subgroups of		
	Gender ²	Age ³	Role ⁴
It is not time-consuming to use.	.137	.379	.416
It is easy to learn.	.880	.461	.302
It is does not require a lot of effort to use.	.284	.774	.514
The fee that I have to pay is reasonable.	.768	.016 ¹	.434
I am pleased with the fee I have to pay for using OLAs.	.931	.394	.384
I don't need to keep my ratings and the feedback I received.	.321	.429	.735
My ratings and the feedback I received are NOT important to me.	.499	.000 ¹	.117

Notes: 1 - These items are significant at the 0.05 level

2 - Subgroups are Male, Female

3 - Subgroups are Late-teen, Young-adult, Adult

4 - Subgroups are buyer, seller

Table 8.1.4b shows there was no significant differences due to gender differences in the perceptions about the perceived costs in using OLAs, but there was a significant difference due to age differences about the statement "The fee that I have to pay is reasonable" ($p = 0.016$). The implication is the auctioneer should devise some fee plans for late-teens, such as discounts for full-time students.

There was also a significant difference, across the age groups ($p = 0.000$), in the perceived importance of the user's rating and feedback received. The late-teens and the

young adults had quite similar scores (3.19, 3.26 respectively), while the adults had a very unfavourable score (4.25). The results indicate that the late-teens and young adults had quite neutral opinions about the importance of their ratings and feedback, while the adults group considered that their ratings and feedback were important to them. According to TCE, the late-teens and young adults in the sample are more likely to switch to other auction web sites because they did mind if they lost their ratings and feedback. However, the adults in the sample are more likely to be loyal customers because they regarded their ratings and feedback as quite important.

The implication to auctioneer is that the auctioneer should try to improve the rating and feedback system to increase the loyalty of the users. Since the late-teens were most unhappy about the fee they had to pay, the auctioneer can consider to have some kind of discount mechanism which is based on the number and recency of positive ratings and feedback received by a user. And this message should be communicated in ways that late-teens more prone to receive, such as using WhatsApp to send out the messages featuring some young celebrities. There was no significant differences in perceived costs of online auctions due to the difference in their roles as buyers or sellers. The implication is that online auctioneers should put equal importance in making the perceived costs as low by both buyers and sellers.

8.1.5 Research Question 3: Perceived Risks

The literature review showed that the perceived risks of using OLA might include financial risk, psychological risk, social risk, and privacy risk (Miyazaki and Fernandez, 2001; Lee, 2009; Almousa, 2011). The variables related to these risks and their means are listed in Table 8.1.5a.

Table 8.1.5a Means scores of risks (N=84)

Risks: measured on a 5-point Likert scale, in which 1=Strongly Agree, 5 = Strongly Disagree	Mean	Std. Dev.	Sig. Level ¹
The item I buy does not match the seller's descriptions.	1.92	.847	.000
The seller will not deliver the item to me as promised.	2.47	.982	.745 ²
The item will be broken during shipping.	2.33	.923	.102 ²
I will pay higher than the market price.	2.88	.969	.000
I will sell at lower than the market price.	2.86	.990	.013
I will regret buying items that I don't need.	2.74	1.011	.029
People around me will disapprove my using of OLAs.	3.27	.910	.000
My personal information being misused when I use OLAs.	2.31	1.018	.090 ²

Notes:

1 – Significance level of the mean in the One-Sample T-Test different from 2.5

2 - Not significantly different from the value of 2.5

Financial risk

Table 8.1.5a shows that the respondents perceived that the major risk was the item they bought might not match the seller's descriptions. The respondents were not worried about "the seller will not deliver the item to me as promised" nor "the item will be broken during shipping". Since they were all users, it reflected that the respondents experienced no major problems with the product delivery. The respondents disagreed that they might "pay higher than the market price" or "sell at lower than the market price". It reflected that the respondents had favourable perception about the basic pricing mechanism of online auctions.

In summary, since the only significant risk perceived by users was that the item they bought might not match the seller's descriptions, the implication for auctioneers is that they should have mechanisms in place to ensure the descriptions given by the sellers are accurate and meaningful.

Psychological risk

It was possible that because of the excitement generated during the bidding process, some users may end up buying items that they don't need (Heyman et al. ,2004; Araujo & Castro, 2009). Table 8.1.5a shows that the item "I will regret buying items that I don't need." was significantly higher than 2.5 (mean = 2.74, $p = .029$). This indicates that the respondents disagreed that they were worried that they would regret buying items that they didn't need. This is consistent with the finding in section 8.1.3 that the users disagreed that they found excitement in the bidding process. This has no implications for the auctioneers as it only concerns the psychological state of the auction user.

Social risk

According to Fishbein & Ajzen (1975), one may refrain from doing some things if he or she believe that some other people think that he or she should not perform the behaviour in question. In OLAs, it is possible that the user may worry about the opinion of the people around him or her about online auctions. Table 8.1.5a shows that the item "People around me will disapprove my using of OLAs" was significantly higher than 2.5 (mean = 3.27, $p = .000$). This indicates that the respondents disagreed that they were worried that their friends and families would disapprove the respondent's use of online auctions. The implications for the auctioneers is that there is no need to promote the image of online auctions in order to overcome the psychological barrier.

Privacy risk

Table 8.1.5a shows that the item “My personal information being misused when I use OLAs” was not significantly different from 2.5 (mean = 2.31, $p = .090$). This indicates that the respondents were quite neutral in their attitude towards the risk of their privacy. This result suggests that the auction users felt that their personal information has not been misused by the auctioneer, i.e. Yahoo!Auction. The implication for auctioneers is that in their communications to the auction users, they need not focus on the prevention of misuse of personal information.

Difference In Perceived Risks due to Gender, Age and User's Role

Table 8.1.5b Difference in perceived risks between groups

Perceived Risks	Significance Level of Differences Among the subgroups of		
	Gender ²	Age ³	Role ⁴
<i>The item I buy does not match the seller's descriptions.</i>	.047 ¹	.002 ¹	.016 ¹
The seller will not deliver the item to me as promised.	.143	.317	.882
<i>The item will be broken during shipping.</i>	.016 ¹	.420	.130
I will pay higher than the market price.	.803	.906	.346
I will sell at lower than the market price.	.524	.676	N.A. ⁵
I will regret buying items that I don't need.	.052	.617	.219
People around me will disapprove my using of OLAs.	.375	.221	.755
<i>My personal information being misused when I use OLAs.</i>	.013 ¹	.330	.387

Notes: 1 - These items are significant at the 0.05 level

2 - Subgroups are Male, Female

3 - Subgroups are Late-teen, Young-adult, Adult

4 - Subgroups are buyer, seller

5 - There is only one group (seller) for the risk, so no comparisons are possible.

Table 8.1.5b shows the male and female respondents showed significant differences in their opinions about some financial risks – “The item does not match the seller’s descriptions”, “The item will be broken during shipping”, and a privacy risk – “My personal information being misused when I use OLAs” ($p = .047, .016, .013$). It also shows female respondents were more concerned about the risks than male respondents. The implication is that in their marketing communications to for female users, the auctioneer should emphasise their protection mechanisms against the financial and privacy risks.

Table 8.1.5b shows different age groups showed significant differences in their opinions about one financial risk – “The item does not match the seller’s descriptions” ($p = 0.002$). The result indicates that young adults were more concerned about this risk, followed by adults, and the late-teens were the least concerned about the same risk among the age groups (means = 1.69, 1.94 and 2.41 respectively). The implication to auctioneer is that in their promotion efforts to young adults, and adults, the auctioneer should try to emphasise the mechanisms it has to ensure the descriptions given by the sellers are accurate and meaningful.

Difference In Perceived Risks Due To User's Role As Buyer Or Seller

Table 8.1.5b shows buyers and sellers had significant differences in their opinions about one financial risk – “The item does not match the seller’s descriptions” ($p = 0.016$). It revealed that buyers who did not sell were more concerned about the risk than buyers

who also sold on OLAs (means = 1.64 and 2.12 respectively). The implication to auctioneer is that in their promotion efforts to users who are not sellers, the auctioneer should try to emphasise the mechanisms it has to ensure the descriptions given by the sellers are accurate and meaningful.

Difference In Perceived Risks Between Users And Non-Users

Table 8.1.5c Means Of Perceived Risks By Non-Users

Risks: measured on a 5-point Likert scale, in which 1=Strongly Agree, 5 = Strongly Disagree	Non-User Means (N=61)	Sig ¹ (Different from 2.5)	User Means	Sig ³ (Difference between Users and Non-Users)
The item I buy does not match the seller's descriptions.	1.97	.000	1.92	.516 ⁴
The seller will not deliver the item to me as promised.	2.10	.000	2.47	.026
I will pay higher than the market price.	2.52	.826 ²	2.88	.024
I will sell at lower than the market price.	2.66	.120 ²	2.86	.423 ⁴
People around me will disapprove my using of OLAs.	3.14	.000	3.27	.405 ⁴
My personal information being misused when I use OLAs.	2.11	.002	2.31	.281 ⁴

Notes:

1 – Significance level of the mean in the One-Sample T-Test different from 2.5

2 - These items are not-significantly different from the value of 2.5 in the one-sample t-test.

3 – This is the significant level of the results from the Kruskal-Wallis test.

4 – This item is not significantly different between the users and non-users in the Kruskal-Wallis test.

Table 8.1.5c shows that the non-users's perceived two risks differently from users. These risks are "The seller will not deliver the item to me as promised" and "I will pay higher than the market price". The results show that the users were less concerned about these risks than non-user respondents. This was expected as the respondents became users because they had a more favourable opinion about risks than non-users. This implies that it is worthwhile for online auctioneers to investigate how to reduce the perceived risks in these two aspects by non-users.

The implication for the online auctioneer is that they should focus on the the benefit of their web sites being able to help buyers to purchase at the lowest price, and there are methods to minimise the likelihood of sellers not delivering the products.

8.1.6 Research Question 4: Perceived Service Quality

The literature review showed that the perceived service quality of using OLA might include Efficiency, System Availability, Responsiveness, and Contact (Parasuraman et al. , 2005).

Table 8.1.6 Means scores of Service quality (N=84)

Efficiency (Efficiency), System Availability (Avbl), Responsiveness (Rsp), and Contact (Cont)	Mean	Sig. Level ¹	Significance Differences Among subgroups of		
			Gender ²	Age ³	Role ⁴
The web site makes it easy to get anywhere on the site.	2.02	.000	.577	.293	.160
Information at this site is well organized.	2.33	.040	.747	.746	.064
The web site loads its pages fast.	2.19	.000	.612	.659	.767
This site is well organized.	2.15	.000	.668	.072	.706
This site is always available for business.	2.06	.000	.636	.947	.198
This site launches and runs right away.	2.20	.000	.426	.381	.077
This site does not crash.	2.21	.000	.890	.174	.847
Pages at this site do not freeze after I enter my order information.	2.37	.063	.996	.230	.569
This site provides a telephone number to reach the company.	2.82	.001	.623	.209	.751
This site has customer service representatives available online.	2.69	.027	.805	.953	.826
It offers the ability to speak to a live person if there is a problem.	2.88	.000	.558	.073	.114
It tells me what to do if my transaction is not processed.	2.46	.625	.120	.213	.325
It takes care of problems promptly.	2.45	.554	.353	.372	.809

Notes: 1 – Significance level of the mean in the One-Sample T-Test different from 2.5

2 – Subgroups are Male, Female

3 – Subgroups are Late-teen, Young-adult, Adult

4 – Subgroups are buyer, seller

Efficiency

Efficiency relates to how fast a user can access information they want in a web site (Parasuraman et al. , 2005). In this research, it relates to how quickly the user can locate the information about item(s) that he or she wants to buy or sell in the online auction web site. Table 8.1.6 shows that the respondents agreed that the web site they have been using allow them to access the information they want very efficiently. However, it is noted that among the four constructs, “Information at this site is well organized” is perceived least favourably by the respondents. Its mean is 2.33 when the means for the other efficiency constructs range from 2.02 to 2.19.

The implication is that the auctioneer should provide more help and explanation on the organisation of the web site. Besides, the auctioneer can consider offering personalisation functions so that each user can customize the layout of the web site, like the iGoogle function provided by Google at <http://www.google.com/ig>.

Availability

Availability refers to the correct technical functioning of the web site (Parasuraman et al. , 2005). In this research, it relates to the degree that the web site is always available, loads quickly, does not crash and responds quickly after the user entered his or her information. Table 8.1.6 shows the respondents agreed that the web site “is always

been available for business”, “launches and runs right away”, “does not crash” and “does not freeze after I enter my order information”.

The results show that the respondents were quite satisfied with the availability of the auction web site they used and therefore no special actions were needed.

Contact

Since it is possible that some users never tried to contact the auctioneer using the phone or online chat, it is important that they make consistent choice to indicate this fact. For example, if some users choose “5 – Strongly Disagree” to a question about the contact of the web site because they never tried to use that function, it will cause a bias to toward the unfavourable end of the scale. Hence, the questionnaire requested the respondents if they had never tried to get phone support or online chat, they should select “3”, which stands for neutral.

Since more than 53 (63%) of the respondents in the questionnaire never tried to make a phone call or use online chat, the fact that the means of Cont1,2,3 are all lower than “3” suggests that most of the users who had tried phone support or online chat had a favourable attitude about the contact of the web site.

Response

Response means the web site’s ability to provide help if there is a problem or question (Parasuraman et al. , 2005). Table 8.1.6 shows the respondents were quite neutral about the web site’s ability provide help if there was a problem or question. This is because the problems usually are related to the product, which has to be answered by the seller, not the auctioneer.

Difference In Perceived Service Quality Between The Groups

The Kruskal-Wallis test was performed on perceived service quality to examine if there was any difference between the groups in the respondents in terms of gender, age and their roles as buyers or sellers. The Krukal-Wallis test shows that there were no significant differences among the groups in the respondents about their attitude towards the service quality of the web site they were using.

Since the non-users had not used OLAs, and the questions regarding service quality were about the normal auction web site that they used, the questions about service quality did not apply to them.

8.2 Analysis of Final Focus Group Results

As discussed in Section 8.1.4, the questionnaire survey shows two issues that need further investigation. Firstly, there is a need to find out why the respondents indicated they web sites they used were well-organised and easy to navigate, yet they indicated that it was time-consuming to use. Secondly, it is necessary to find out why the respondents considered the fee they had to pay as reasonable, yet they were not pleased with the fee they had to pay. In order to investigate these two issues, a final focus group was conducted on the 26th of November 2012. The subjects were six students studying at SPEED. In the following discussions, FGP_n denotes the *n*th participant in the final focus group. The participants were told that they could express their views on the above two issues, as well as any other opinions about the online auction.

The discussion of the focus group was recorded by a voice recorder. The author acted as the moderator and focused on soliciting answers from the participants. On 30th of November, the voice file and transcript of the discussion were sent to the subjects. The subjects confirmed that no modifications were necessary.

8.2.1 Time and Effort

The questionnaire shows that the respondents agreed that the online web sites were well organised and easy to navigate, yet they found it time-consuming to use. So the participants were asked to explain this apparent contradiction. The participants pointed out that many sellers gave false product descriptions and opening bid price. The participants found this greatly increased their time and effort in using online auctions because the search results do not show what they were actually looking for.

FGP2: "Many sellers do not allow the users to bid. So the final transaction price is not known, and you cannot really compare prices."

After the final focus group, the author reviewed Yahoo!Auction in Hong Kong. It was confirmed that many online auction users included their mobile phone numbers as part of their user name, such as Tel_9123456. Some users hinted that their e-mail address is just user name plus "@yahoo.com.hk". These ways allow the buyer and seller to contact each other outside the web site, and thus avoid paying the transaction fee. The implication for the auctioneer was that it should check for user names or messages that can suggest their email addresses or phone numbers.

The participants further explained that unscrupulous sellers state the opening price of their items as one-dollar so as to attract buyers' attention and gain higher positions in search results when items were sorted by bidding price.

FGP2: "These sellers are not playing by the rules these days. Many list their items as One-dollar-bid, but clearly state that they don't welcome bids. They even warn to give negative ratings to anyone who bids."

FGP2: "They list items as One-dollar-items so that their items will show at the top of the auction web site. However, they actually will only sell at the buy-it-now price."

FGP3: "Yes, in Yahoo!Auction, there is a special option for searching One-dollar-bid items. This function was supposed to save the buyer's effort and many users use this option."

FGP2: "In the search result page, users can rank items by the asking price. One-dollar items will top the list. One-dollar items will get more views than other items. Again, if the user sorts the items by number of views, these items will come out on top."

FGP6: "Sellers can use list items as one-dollar-items to save cost. It is because the service fee is based on the final price on the system."

Figure 8.2.1 shows that Yahoo!Auction had special "\$1" bids in the auction home page. The same feature was also available in the advanced search function. Many dishonest sellers listed their items with a \$1 opening price to get their items included in the "\$1 Bids" list or in the result page of an advanced search. However, these sellers would state in the item details that "\$1 = \$100". When the users took a closer look, they would find out they had to pay \$1500 for an item had a closing price of \$15!

Figure 8.2.1 “One-Dollar” Bids

(Captured on 26th Feb. 2013)



Another reason that caused extra time and effort is that many sellers included misleading information in product descriptions, so that their products will show in the search results list by buyers who search for other products. One of the participants actually used this “trick” herself.

FGP6: “A person selling iPhone5 could have set the item heading containing ‘iPhone3G / iPhone4 / iPhone4S’. This makes that item to appear in all searches related to iPhone, not just iPhone5.”

FGP3: “That is what I did when I sell clothes on auctions. I included many brand names in my item headings.”

The following participant pointed out that the auctioneer had taken action and the information in the web site were more accurate and meaningful than before. When he search for items in ascending price order or “\$1” bids, there were no more “fake” low prices of “one-dollar” only. He found his search for the items much more efficient.

FGP6: “There is a ‘Report this item’ feature in Yahoo!Auction. My listings of One-dolloar item was removed because someone reported my listing to Yahoo!Auction. Then I used the same feature on other One-dollar-bids as revenage. It makes me feel happy when Yahoo!Auction tells me the items that I reported are now removed. That is really efficient and cool. Now there are many more items listed with a real price rather than as One-dollar items.”

This fact that the respondent above was still happy after his dishonest action was reported shows that he still had a favourable attitude about the auctioneer’s policing

action. He said that he would continue to use the web site. This shows that the policing action taken by the auctioneer was welcome by the users, including those users who were offenders once. The implication is that the auctioneer should continue this kind of policing action.

8.2.2 Monetary Cost

The questionnaire shows that the respondents considered the fee they had to pay as reasonable, yet they were not pleased with the fee they had to pay. The participants were asked to offer some explanations. The participants explained that for buyers, most online auction web sites didn't charge any money. For the seller, the charge was also reasonable for the basic service of getting listed in the auction web site. However, the seller can choose to purchase some extra services. These services include getting top positions in search results or getting highlighted by using different colours or special effect such as blinking. The small sums of buying extra services often added up to become quite a lot of money. A respondent, who paid the fees using PayPal, mentioned his unpleasant experience when discovering the total charge.

FPG6: "There are some small charges for promoting the item. The charge can be something like 10 to 25 dollars and you don't really feel it...until you see the credit card bill. When you were using the auction, the payment is so easy. The web site just requires you to pay small sums like five dollars of accumulated charge before you can proceed. Then I see Yahoo!Auction, Yahoo!Auction, Yahoo!Auction repeatedly on my credit card statement."

Since the majority (77%) of the respondents were users of Yahoo!Auction, it was necessary to review the service fees charged by Yahoo!Auction. Figure 8.2.2a shows the fee schedule of Yahoo!Auction Hong Kong and Figure 8.2.2b shows the Fee Schedule of eBay.

A comparison of these schedule revealed that Yahoo!Auction had a flat pricing structure which charged 1% of the opening price for listing the item, but in comparison, eBay had more options for the seller to choose from. In eBay's cheapest option, there was no charge for listing the item. Figure 8.2.2a also showed that Yahoo!Auction charged the seller based on the "opening price". This actually motivated many sellers to abuse the system by listing their items as "\$1 bids", as testified by the subjects in the final focus group. This kind of

abuse by some sellers led to user's dissatisfaction with the service quality of the web site as explained in RQ4.

Figure 8.2.2a Fee Schedule of Yahoo!Auction Hong Kong.

It shows a simple fee structure that may encourage sellers to use "fake" low opening prices. (Captured on 8th Feb. 2013)

Yahoo!拍賣刊登費		
收費計算		付款方法
拍賣品分層收費 一般拍賣品類別刊登費採取分層收費的計算方法，大致上是基於賣家刊登的拍賣品，設定的開售價或拍賣底價作計算，以較高者為計算基礎。換言之開售價或拍賣底價越高，所需繳付的刊登費用亦隨之越高。		
收費計算		
拍賣品	一般拍賣品類別	
刊登費 (以每件拍賣品計算)	分層收費 開售價或拍賣底價(以較高金額計算)刊登費	
	HK\$ 0.01-99	HK\$1
	HK\$100-199	HK\$2
	HK\$200-399	HK\$3
	HK\$400-499	HK\$4
	HK\$500-699	HK\$5
	HK\$700或以上	HK\$6
每次刊登時間	10日	
免費自動重新提交	2次(當拍賣品沒有賣出,可獲免費自動重新提交兩次。)	
立即購買	有	
改動分類	不可以	
留下賣家聯絡資料	不可以	

Yahoo!Auction Hong Kong charges 1% of the opening price for listing items.

Figure 8.2.2b Fee Schedule of eBay

It shows a sophisticated and flexible fee schedule, which caters for the needs of different types of users. (Captured on 28th Jan. 2013)

Compare eBay Stores subscriptions				
Store levels have different subscription and fixed price insertion fees, and the higher store levels offer lower insertion fees.				
	No store	Basic	Premium	Anchor
Subscription fee	\$0	\$15.95	\$49.95	\$299.95
Auction insertion fees	\$0	\$1		\$1
Fixed price insertion fees	\$3	\$1	\$0	\$0
Auction final value fees	\$10	\$6	\$6	\$6
Fixed price final value fees	\$7	\$7	\$7	\$7
eBay-hosted pictures	Free	Free	Free	Free
Total estimated fees	\$20	\$31	\$64	\$314
Total estimated sales (based on the numbers you entered): \$200				

eBay has a more flexible fee structure. It may be free to list (insert) the items.

The implication for auctioneers is that they should introduce a service package so that the users can subscribe to a plan so as to avoid unpleasant surprises when they receive the bill.

8.2.3 Mobile Platform for Online Auctions

A participant raised the importance of have applications to support the online auction web site on mobile platforms, such as mobile phones and tablet PC's. All the other participants agreed to this. The participant enthusiastically demonstrated eBay's mobile

application to the group. He considered the eBay application was much better than Yahoo!Auction's mobile application aesthetically and functionally.

FGP6: "EBay(shows his iPad to the group)...has created a mobile application that gives you a good "feel". It actually attracts me to use the web site. However, there are not many Hong Kong users there."

FGP3,5: "The Yahoo!Auction mobile application is useless and difficult to use. There are still a lot of 'new' message for the item that were sold long time ago."

The online bidding process is time-sensitive, so the users must monitor their listings and biddings continuously. This means that many of them have to use some mobile device when they are on trains or buses, which are the main means for transportation for most Hong Kong people.

FGP6: "Users need to monitor the progress of selling and bidding continuously."

The implication for Yahoo!Auction is that they should improve their mobile application and its web site for mobile phones so that it can compete effectively with other online auctioneers.

8.2.4 Conclusion

The data from the survey was analysed by one-sample t-test and Kruskal-Wallis test successfully to found out the factors.

The survey showed the following perceptions by Hong Kong Internet users. The benefits of in the adoption of online auctions include liquidity, entertainment and price transparency, but not excitement. The transaction costs in the adoption of online auctions include time, effort, service charge and the user's reputation. The risk in the adoption of online auctions is financial risk. The psychological risk, social risk, and privacy risk are not perceived as important. The service quality considered by Internet users in Hong Kong when they choose an online auctioneer includes efficiency and system availability. Responsiveness and Contact are not perceived as important.

The questionnaire survey showed two issues that need further investigation. Firstly, there was a need to find out why the respondents indicated they web sites they used were well-organised and easy to navigate, yet they indicated that it was time-consuming to use. Secondly, it was necessary to find out why the respondents considered the fee they had to pay as reasonable, yet they were not pleased with the fee they had to pay.

These issues were resolved by conducting a final focus group. For the first issue, the final focus group showed that the users found the auction websites time-consuming to use because of some sellers created false one-dollar bids and used misleading information in product descriptions. For the second issue, the final focus group showed that the flat fee structure used by Yahoo!Auction was not considered favourable by the subjects.

Chapter 9 - Conclusions

The online auction has become a major phenomenon. In the third quarter of 2012, the value of merchandise sold on eBay's U.S. auction website increased by 16%, from US\$5.59 billion to US\$6.48 billion (Dusto, 2012). It is estimated that over a 10-year period to 2017, the industry in the U.S. will grow at a rate that outpaces the U.S. GDP (IBISWorld, 2013). However, online auctioneers face challenges from traditional businesses, other online auction websites, and newer forms of electronic commerce such as group purchase. According to the principle of Network Economies of Scale (Tapscott & Tapscott, 1999), the ability of an auctioneer to remain competitive depends on its ability to attract a large enough critical mass of users. Therefore, it is important for online auctioneers to understand the source of customer value - the driver of customers to their websites. Previous research on OLAs has mainly been concerned with optimisation of bidding or selling strategies, liquidity and price equilibrium, or very specific behaviour in auctions such as sniping (Bapna et al., 2008; De Haan et al., 2009; Wu et al., 2009; Giot & Grammig, 2006; Yeniyurt et al., 2011; Ely & Hossain, 2009; Dass, 2011). There has been very little research done on the factors that affected the Internet user's adoption of OLAs (Online Auctions), therefore this research is original and of significant importance.

This chapter will begin by summarizing the theories that guided this study. It will then discuss the findings and limitations of the research. It will also discuss the academic contributions and the implications for practice. Finally, it will make some suggestions for further research.

9.1 Theories that guided this research

As discussed in the literature review chapter, there are no overarching theoretical models that describe the factors affecting the adoption of online auctions by Internet users. The author instead reviewed traditional business and electronic commerce business literature which showed that there were four basic dimensions to customer value of services provided through websites. These dimensions are Benefit, Cost, Risk, and Service quality (Sanchez et al., 2006; Grönroos, 1997; Chircu & Mahajan, 2005; Forsythe & Shi, 2003; Sweeney & Soutar, 2001; Chen & Dubinsky, 2003). The literature review also showed that these four dimensions could be described by the constructs in the models of the Technology Acceptance Model (Davis, 1989), Transaction Cost Economics (Williamson, 1981), and E-S-QUAL and E-RecS-QUAL (Parasuraman et al., 2005).

In summary, three points were considered in the application of the TAM, TCE, E-S-QUAL and E-RecS-QUAL. Firstly, they were complementary to one another in explaining the dimensions of customer value in OLAs. The TAM does not include monetary cost, and service quality dimensions which are included under the TCE and E-S-QUAL and E-RecS-QUAL. Secondly, these theories TAM, TCE, E-S-QUAL and E-RecS-QUAL are not completely separated. The perceived ease of use construct in the TAM overlaps with the time and effort in the TCE and the risk construct in the TCE overlaps with the “Privacy” construct in the E-S-QUAL. Finally, not all the constructs from these theories should be used in this research. The frequency construct in the TCE is not applicable in this research because this research is about individual buyers, whose frequencies for using online auctions cannot be reasonably predicted. Likewise, the “Fulfilment” construct in the E-S-QUAL was not considered in this research because fulfilment is not directly under the auctioneer’s control.

The TAM (Technology Acceptance Model) has two constructs: perceived usefulness and perceived ease of use. Perceived usefulness guided the search for factors that affect the benefit dimension of customer value in OLAs. Perceived ease of use guided the search for non-monetary factors that affect the cost dimension of customer value in OLAs. However, the perceived ease of use construct in the TAM does not include monetary cost. The TCE (Transaction Cost Economics) guided the search for factors that affect monetary and non-monetary costs, as well as factors that affect the risk dimension of customer value of online auctions. The monetary cost relates to the service fee charged by the online auctioneer. The non-monetary cost is based on the asset specificity construct of the TCE. In this research, asset specificity refers to the user’s reputation in a particular online auction website. The E-S-QUAL and E-RecS-QUAL (Parasuraman et al., 2005) guided the search for factors that affect the service quality dimension of customer value in online auctions. The E-S-QUAL suggests the factors that affect the service quality of a website when no problems occur. The E-RecS-QUAL suggests the factors that affect the service quality of a website to enable a customer to deal with problems that arise.

After these considerations, the constructs of the TAM, TCE, E-S-QUAL and E-RecS-QUAL was combined to form an initial model. Based this initial model, data were collected in three stages - pilot focus groups, a questionnaire, and a final focus group

were conducted to identify the factors that were considered important by the subjects. Table 9.1 shows the initial model, and the factors identified in the three stages.

Table 9.1 The Initial Model Describing The Factors Affecting The Adoption Of Online Auctions

Initial Model based on Literature Review			Pilot Focus Group	Questionnaire	Final Focus Group
Dimension	Factors	Theory(ies)			
Benefits	Liquidity	TAM ¹	✓	✓	✓
	Enjoyment	TAM ¹	✓	✓	✓
	Price Transparency	TAM ¹	✓	✓	✓
	Excitement	TAM ¹	✓	X	X
Costs	Time	TAM ²	✓	✓	✓
	Effort	TAM ²	✓	✓	✓
	Service Charge	TCE ³	✓	✓	✓
	Reputation	TAM ² , TCE ³	✓	✓	✓
Risks	Financial	TCE ⁴	✓	✓	✓
	Psychological	TCE ⁴	X	X	X
	Social	TCE ⁴	X	X	X
	Privacy	TCE ⁴ , E-S-QUAL ⁵	X	X	X
Service quality	Efficiency	E-S-QUAL ⁵	✓	✓	✓
	System Availability	E-S-QUAL ⁵	✓	✓	✓
	Responsiveness	E-RecS-QUAL ⁶	X	X	X
	Contact	E-RecS-QUAL ⁶	X	X	X

Notes:

1. Derived from Perceived Usefulness in TAM (Technology Acceptance Model) (Davis, 1989)
2. Derived from Perceived Ease of Use in TAM (Technology Acceptance Model) (Davis, 1989)
3. Derived from Asset Specificity in TCE (Transaction Cost Economics) (Williamson, 1981)
4. Derived from Uncertainty in TCE (Transaction Cost Economics) (Williamson, 1981)
5. Construct in E-S-QUAL (Parasuraman et al., 2005)
6. Construct in E-RecS-QUAL (Parasuraman et al., 2005)

✓ : Identified as a factor by the subjects at that particular stage.

X : Not identified as a factor by the subjects at that particular stage.

As this research aimed at finding out factors that affect the adoption of online auctions, a factor should only included in the final model when it was considered to be important in all three stages of data collection. According to this criterion, ten factors were identified as important and they are listed in the final model in Table 9.2.

9.2 Summary and Discussion of Findings

The following section discusses the findings. Some relationships among the RQ's (Research Questions) are also explained. The research questions were based on the preliminary model that resulted from the literature review.

Research Question 1 (RQ1): What are the perceived benefits of Internet users in Hong Kong in the adoption of online auctions? Do they include Liquidity, Entertainment, Price Transparency, and Excitement? What other benefits may be involved?

The TAM predicts that factors affecting the decision of a user to adopt a technology are basically: perceived usefulness and perceived ease of use (Davis, 1989). In this research, the perceived usefulness is the benefits in using OLAs. The analysis showed that the most important benefits were liquidity (Giot & Grammig, 2006) and price transparency (Jank & Shmueli, 2010). The constructs relating to these benefits were: "compare prices and get more information", "find items that are difficult to find elsewhere", "reduce wasting my used items", "lower my costs in buying/selling items", and "find sellers for the item(s) that I want to buy quickly". The benefit of "enjoyment in browsing" online auction websites was less important than the benefits just stated above. The benefit of "excitement", as stated by Hou & Elliott (2010), was found to be not important for the respondents in this study. The results indicated the excitement in bidding for items and in meeting with strangers to complete transactions were not important to the respondents. The findings from RQ1 indicated that users of online auctions were cost-conscious and not excited about the bidding process. These findings were consistent with those from RQ2 and RQ3, as will be discussed below.

In summary, the perceived benefits of Internet users in Hong Kong in the adoption of online auctions include liquidity, entertainment and price transparency, but not excitement.

Research Question 2 (RQ2): What are the transaction costs perceived by Internet users in Hong Kong in the adoption of online auctions? Do they include time, effort and service charge and the user's reputation? What other costs may be involved?

The time and effort in using OLAs corresponded to the perceived ease of use construct in the TAM (Davis, 1989). The fee charged by the online auctioneer, and the user's ratings and feedback accumulated from using an auction website corresponded to the

monetary cost and asset specificity in Transaction Cost Economics (Williamson, 1979; Williamson, 1981).

In terms of monetary costs, the online survey showed that the users considered the fees charged by the auction website to be reasonable, yet they were not pleased with the fees they had to pay. The final focus group provided additional explanation on this issue. The subjects explained that they considered that the fees for using the basic services were reasonable. However, they were not pleased with the charges for additional services such as highlighting the item with different colors. This was logical and consistent with the findings from RQ1, which indicated that online auction users were cost-conscious. The fee schedules of eBay and Yahoo!Auction were reviewed in section 8.1.4. The review showed that Yahoo!Auction has a flat, per-item fee structure. However, eBay's fee schedule is more sophisticated. Under eBay's fee structure, users who have higher transaction volumes can reduce their service charge per item, and they can subscribe in advance for the use of value-added services such as highlighting items or being listed at the top. Competitors of eBay, such as Yahoo!Auction, should introduce a fee schedule similar to eBay's in order to encourage users to sell more and avoid unpleasant surprises when they receive the bill.

In terms of non-monetary costs, it was found that online auctions were considered easy to use and not difficult to learn. However, the respondents considered using OLAs to be time-consuming. The final focus group indicated that some users spent a lot of time because they had to identify items listed by honest sellers from those listed by unscrupulous sellers, who included misleading or false information about their products. It was also found that the asset specificity of reputation is important. The respondents considered the ratings and feedback they received as assets that they want to keep. This is consistent with TCE (Williamson, 1981) which states that when asset specificity is great, the parties will make special efforts to make the transaction to have good continuity properties.

In summary, the transaction costs perceived by Internet users in Hong Kong in the adoption of online auctions include time, effort, service charge and the user's reputation.

Research Question 3 (RQ3): What are the risks perceived by Internet users in Hong Kong in the adoption of online auctions? Do they include financial risk, psychological risk, social risk, and privacy risk? What other risks may be involved?

Financial risk in online auction referred to the potential for monetary loss due to paying too high a price for an item, or selling an item at too low a price (Lee, 2009). Psychological risks referred to the frustration and regret felt by the buyer for having bought a product that did not match their buying goals (Holt & Sherman 1994). Social risk referred to the loss of social status because the product purchased by a buyer may result in disapproval by the buyer's friends, family or colleagues (Jacoby and Kaplan, 1972). Privacy risks referred to the potential loss of control over personal information (Almousa, 2011).

This research found that users were mainly concerned with the financial risk. The subjects indicated that they worried that the item might not match the seller's descriptions, and that the seller may not deliver the item as promised. The subjects explained that for expensive items, they would arrange to meet with the seller to examine the product. If they found the product to be of inferior quality, the subjects would negotiate a price reduction on the spot. This kind of face-to-face meeting also minimizes the privacy risk as explained below. Although the face-to-face meeting might have involved other possible risks such as safety and personal privacy, no such risks were mentioned in all the focus groups and in the open questions in the questionnaire.

The findings concerning privacy risk contradicted previous research. Previous research has shown that privacy risk was a significant factor in a user's adoption of online shopping (Crisp, Jarvenpaa & Todd, 2003; Forsythe & Shi, 2003; Miyazaki & Fernandez, 2001; Lee, 2009; Almousa, 2011). However, this research showed that privacy risk was insignificant to the respondents. The subjects explained that they prefer to complete the transaction face-to-face. When they met up with the other party to complete the transaction, they did not have to provide private information such as a credit card number or shipping address. Therefore, the privacy risk was not perceived as significant in online auctions by the subjects.

The results indicated that the users did not worry about social risks. That is, they were not worried that their friends and families may disapprove of them using OLAs. Neither were they concerned about psychological risks – they did not regret buying items they might not need. This point was consistent with the findings from RQ1, which showed that the respondents did not agree that they found it “exciting when bidding for items”. Thus the claim by Holt & Sherman (1994), that the bidding frenzy created by the

competition from other bidders would cause subsequent regret for bidding at too high a price, did not apply to the respondents in this study.

In summary, the risk perceived by Internet users in Hong Kong in the adoption of online auctions is financial risk. The psychological risk, social risk, and privacy risk are not perceived as important.

Research Question 4 (RQ4): What aspects of service quality are considered by Internet users in Hong Kong when they choose an online auctioneer? Do they include Efficiency, System Availability, Responsiveness, and Contact? What other aspects of service quality may be involved?

The constructs for measuring the quality of online auction websites were taken from E-S-QUAL and E-RecS-QUAL (Parasuraman et al., 2005). This research found that users regarded both efficiency and system availability as important. In terms of efficiency, the users found the online auction websites to be well-organised, but the information on those websites was not always useful and sometimes increased the required time and effort needed. This apparent contradiction was due to the misconduct of unscrupulous sellers. They used false prices and information to get their products to rank higher in search results lists or get their items included in search result lists for other products. This was explained in the findings of RQ2 above. In the final focus group, the subjects reacted favourably to the policing action taken by Yahoo!Auction, which was used by 77% of the respondents in the online survey. In terms of responsiveness and contact, the respondents were neutral in their perception. That is, the respondents did not regard responsiveness and contact as important factors. Actually, more than half of the respondents did not require support from the auction website. Furthermore, for those who did try to get support, online chat was a preferred choice over phone calls. These findings only partially matched those of Parasuraman et al. (2005). The reason for this is that the user questions were mainly about the item they were trying to bid for, so they did not need to contact the auctioneer with questions about the product.

In summary, the service quality considered by Internet users in Hong Kong when they choose an online auctioneer includes efficiency and system availability. Responsiveness and Contact are not perceived as important.

9.3 Research Objectives

This study has achieved its research objectives, which contributes to the overall aim of helping online auctioneers to achieve competitive advantage through a better design of their service offerings. For research objective OBJ1, it has found out that Hong Kong Internet user's perceived benefits of online auctions are finding information quickly and enjoyment. The online auctioneer should invest in technologies that enable users to find useful information quicker and more items that they may be interested in. For example, the auctioneer can offer collaborative filtering, in which customers interests are compared with those of other customers in the merchant's database (Chaffey et al., 2009). An example of this technology can be found on the Amazon web site, in the form of "Customer who bought book X also bought CDs Y and Z". For auctioneers, they can use the technology to suggest to users about items that they have not included in their search, but that are of interest to similar users who are looking for similar items. For research objective OBJ2, it is found that Hong Kong Internet user's perceived their reputation as a transaction cost, because their reputation was specific to the website they used. According to Transaction Cost Economics (Williamson, 1981), a party would be less likely to enter into the transaction to avoid lock-in due to asset specificity. This implies that the online auctioneer should offer some incentives to encourage the user to use the auction website when they are light users. After a user's reputation is established, the user is likely to be "locked-in" as the reputation is specific to the website only. For research objective OBJ3, it is found that Hong Kong Internet user's perceived risk of online auctions is financial risk. They are worried that the items they buy do not match the sellers' descriptions. This implies auctioneers should have mechanisms in place to ensure the descriptions given by the sellers are accurate and meaningful. In this research, the subjects favoured the policing action taken by the auctioneer to eradicate false one-dollar bids and the use of misleading description. For research objective OBJ4, it is found that Hong Kong Internet user's perceived service quality of online auctions is efficiency and system availability. This means that online auctioneers should strengthen their multi-channel communications strategy with the users. The subjects indicated that want to have more channels for communications such as using mobile phones to monitor their bids and sales when they are on the road. The subjects also want to have online chat, in addition to the conventional e-mail and phone calls, for contacting the auctioneer.

9.4 Limitations of this Research

This research is limited to consumer-to-consumer online English auctions. It does not include specific forms of online auctions such as name-your-price auctions (NYP). In NYP's, the individual consumer makes an offer to purchase an item at a certain price, if the merchant is willing to sell the item at that price, the consumer will get the item. Since the consumer specifies the price, it is possible to get the item at a substantial discount. NYP auctions were pioneered by Priceline.com, and it is the second most-popular auction format on the web (Laudon and Traver, 2013). Therefore, future researchers can adopt the model from this research and investigate how the model can be applied to NYP auctions.

This research used non-purposive sampling, so no specific attempts were made to choose samples that reflect the same characteristics of the Hong Kong population as a whole. The findings of this research is only indicative of the Hong Kong population to a limited extend. Future research can repeat the same research using purposive sampling (Cooper and Schindler, 2011) to verify if the findings in this research are also valid when some aspects of the sample are varied. This is the literal replication suggested by Yin (2009). It is suggested that the research can be duplicated on a sample that have the same gender distribution characteristics as the Hong Kong population.

Due to the relatively small size of the sample (152 responses), there is a limitation in the choice of statistical methods to test the possible differences across the subgroups in the sample. This research used the Kruskal-Wallis test, which does not require the distribution of the underlying population to be normal (Carver and Nash, 2012). This is a conservative approach as Hair et al. (2011) indicated that normality of the underlying population can be assumed when the sample size is 30 or more.

Another limitation was that the open-ended questions in the questionnaire were limited to demographics such as occupation and auction websites used. However, this limitation was compensated for by the use of pilot focus groups before the questionnaire and a final focus group after the questionnaire. Future research can adopt the questionnaire and add more questions for anticipatable reasons, such as adding another construct from another theory. This is theoretical replication as suggested by Yin (2009).

Finally, as pointed out in "Section 6.6.3 Focus Groups For This Research", there was a possible cultural issue because Chinese students may be reluctant to share their views in front of a lecturer. The data from the focus groups showed that there was enough

variety of opinions and disagreements to indicate that the subjects did freely express their views. The research can be repeated using anonymous online surveys to eliminate any bias caused by the relationship between the researcher and the subject.

9.5 Academic Contributions

The first contribution was demonstrating the suitability of the TAM, TCE, E-S-QUAL and E-RecS-QUAL in C2C (consumer-to-consumer) electronic commerce, and the development of a questionnaire. This research showed that the above theories can serve as a basis for exploratory studies in C2C e-commerce as proposed by Devaraj et al. (2002) and Jones and Leonard (2007).

The second contribution was the creation of a questionnaire. A questionnaire was developed by combining constructs from the theories list above, and the knowledge gained from the pilot focus groups. Future researchers can replicate the research by applying the same questionnaire and “predict similar results” (literal replication) (Yin 2009, p.52), or vary some aspects of the questionnaire and “predict contrasting results but for anticipatable reasons (theoretical replication)” (Yin 2009, p.52). For example, this model can be used to conduct research on other forms of consumer-to-consumer electronic-commerce that are facilitated by a third-party platform provider such as HomeExchange.com. More detailed suggestions are made under section “9.7 Suggestions for Further Research”.

The third contribution was the development of a model of factors affecting adoption of online auctions, which can be used by online auctioneers to identify areas for improving the customer value of their website. This model is shown in Table 9.2.

Table 9.2 Final model for factors affecting the adoption of online auctions

(Note that only the factors that were found to be important by the subjects at all the stages in Table 9.1 are included in this final model)

Dimension	Factors
Benefits	Liquidity
	Enjoyment
	Price Transparency
Costs	Time
	Effort
	Service Charge
	Reputation
Risks	Financial
Service quality	Efficiency
	System Availability

There are three important academic implications when this model is compared with previous research on electronic commerce. These concern the role of privacy risk,

online service quality and excitement in online auctions. The first implication is that although previous research showed that privacy risk was a significant factor in a user's adoption of online shopping (Forsythe & Shi, 2003; Lee, 2009; Almousa, 2011), privacy risk is not in the final model because the subjects did not consider this as important in all the three data collection methods. The second implication is that the final model shows that the online service quality models E-S-QUAL & E-RecS-QUAL (Parasuraman et al., 2005) cannot be applied to online auctions. In E-S-QUAL and E-RecS-QUAL, there are seven constructs, whereas in this research, it shows that the subjects only consider Responsiveness and Contact as important factors in their consideration for the adoption of OLAs. The third implication is that it questioned the role of excitement in online auctions. There was previous research which claims that online auction is a source of excitement for bidders (Turban, King and Lang, 2011; Solomon, 2011) and creates a desire to win (Hou & Elliott 2010). This research shows results that are contrary to these claims. The factor of excitement was not considered as important by the subjects in this research.

This research also contributed to the learning and teaching activities at SPEED, the school in which the author is working. The findings of this research were presented in the Teaching & Learning and Business & Management Conference organized by SPEED of Hong Kong Polytechnic University, and Northumbria University on 19th March, 2013. The present author also used the materials gained from this research to enrich the courses he has been teaching, including "Creative Online Public Relations and Internet Marketing" and "Management Information Systems".

9.6 Contributions to Practice

This research has several implications for online auctioneers as discussed in stated in Sections 8.1 and 8.2. This section discusses several suggestions based on the implications. These suggestions are feasible for online auctioneers because they can customize their marketing communications with each user based on their characteristics.

The first suggestion is that the auctioneer should allow the user to choose a fee schedule, like that of eBay's, instead of a flat per-item structure. The fee schedule should be structured such that as the usage increases, the cost per item will be lower than fixed per-item charge. When the user subscribes to a particular plan from the fee schedule, they will know exactly how they will be charged based on their usage. On one hand, this will avoid unpleasant surprises when users receive their bill; on the other hand, this will encourage light users to use the auction website more. When the user uses an auction website more, the asset specificity of their user reputation will increase, and so will their loyalty. It is because the feedback and ratings they receive are specific to the auctioneer's website. In promotion to non-users, auctioneers should emphasise that online auctions can lower their costs in buying and selling. This is especially important for users in their late-teens. The auctioneers should consider offering discounts for full-time students.

The second suggestion is that the auctioneer must regularly take policing actions against unscrupulous users. This is because users perceived the benefit of comparing prices and finding information to be the most important benefit, the auctioneers should ensure that the information provided by sellers in the listings are accurate and there is no abuse of this. The focus group revealed that Yahoo!Auction's recent policing action removing fake "one-dollar" bids and abuse of inaccurate keywords was considered very important by the users. Therefore, auctioneers should take similar policing actions regularly. Besides waiting for users to report suspicious false item information, the auctioneer should also check for user names that can suggest their email addresses or phone numbers. On one hand, the policing action will increase the perceived efficiency of the website by the users when they are looking for items; on the other hand, the auctioneer's revenue will improve by reducing "outside-the-system" transactions.

The third suggestion is that the auctioneer could consider partnering with or acquiring specialty auction websites. This kind of strategic acquisition not only increases the clientele of the auctioneer, but also increases the perceived entertainment in using the

website by including unusual, unique or collectible items. Examples of these target websites include Cigarbid.com and Golfbidder.co.uk. In the past, eBay has used both partnership and acquisition strategies to grow its business. In January 2002, eBay and Sotheby announced their partnership. In their partnership, auctions on the Sothebys.com were included in the eBay marketplace. These Sotheby auctions featured the categories of fine and decorative art, antiques, rare books, jewelry and collectibles. This partnership allowed eBay users to participate in Sotheby's traditional auction by bidding online from their home or office (Vlex, 2002). eBay acquired Half.com in 2000 to help achieve its growth (Stangler, 2010). According to Eghoff & Mabey (2007), eBay acquired Half.com because eBay considered it as a threat. At the time of writing, Half.com was part of eBay specialising in C2C buying and selling of new and used books, music, movies and games. The fee charging structure of Half.com was different from eBay because Half.com did not have listing charges (Half.eBay.com, 2013). Examples of other similar target web sites that can attract buyers looking for special collections include Cigarbid.com (for cigars), TackleBerry.co.jp (for used fishing equipment) and Golfbidder.co.uk (for golf related products).

The fourth suggestion is that the auctioneer must review its multi-channel distribution strategy. Besides the website, the auctioneer should use other channels such as mobile applications and SMS (Simple Message Service). As more and more users access the Internet using mobile devices like tablets, notebooks and mobile phones, the website's compatibility with mobile devices, is becoming increasingly important in enhancing the perceived ease of use for mobile users. The final focus group revealed that the current mobile application released by Yahoo!Auction was not considered easy to use. ComScore (2010) reported that auction sites were the fastest growing category among all mobile websites in Europe. The growth of online auction sites was higher than that the growth of shopping guides, online retail, and social networking sites. This shows the importance of a mobile application for an online auctioneer. The auctioneer must also consider having a consistent and reliable mobile application for the most popular mobile platforms, namely Android and Apple iOS.

The fifth suggestion is that the auctioneer should adopt a multi-channel communication strategy for offering customer service. The subjects indicated that the online chat is a useful communication channel. The current Yahoo!Auction website only allow users to ask questions using the phone or email. There are no other channels such as online chat or click-to-talk. Click-to-talk is a technology that allows a website user to talk directly

to a company's service representative in real-time by just clicking a button labelled "click-to-talk". This has been used successfully by Dell (Sharma & Sheth, 2010). It is also suggested that the online auctioneer should add online chat as an additional channel for delivering customer service. Ebay already allows users to seek help using online chat in one of the three most commonly used languages in Hong Kong – Traditional Chinese, Simplified Chinese and Putonghua.

The sixth suggestion is that the auctioneer can offer collaborative filtering. It is observed that at Yahoo!Auction and eBay, they both assist the user to search for items by showing a list of the user's search history. While this search history reminds users of their interests, it is also useful to tell users what they may like even when their previous searches do not show those interests. Collaborative Filtering (CF) is a technology that has been used successfully by Amazon to achieve this (Chaffey et al., 2009). In CF, a customer's interests are compared with those of other customers in the merchant's database (Chaffey et al., 2009). An example of this technology can be found on the Amazon web site, in the form of "Customer who bought book X also bought CDs Y and Z". For auctioneers, they can use the technology to suggest to users about items that they have not included in their search, but that are of interest to similar users who are looking for similar items.

The seventh suggestion is that auctioneer can use newer technologies such as eye-ball-tracking so that they can monitor the customer's interests even before they make the click. Eye-ball tracking (also known as eye movement monitoring) is a biometric measurement technique that can find out which part(s) of the web sites catch more user attention and how the user's eye focus shift from one part of the web page to another, even when no clicks have been made (Glaholt & Reingold, 2011; Goth, 2010; Ohme, Matukin, and Pacula-Lesniak, 2011). The requirements are just a web-cam and software installed on the user's computer. The user is not required to wear any equipment. While the full-scale deployment of this to all users is not feasible yet, the auctioneer can recruit volunteers to help test the different designs of the auctioneer's website in order to make regular and continuous improvement (Glaholt & Reingold, 2011; Goth, 2010).

9.7 Suggestions For Further Research

The author suggests three directions for further research. Firstly, the research can be repeated using purposive sampling to cover different age groups from this research.

Secondly, the model resulted from this research can be applied to study aggregated buying, which is also known as group purchasing (Laudon and Traver, 2013; Schneider, 2013). Thirdly, the model can be used to study the factors affecting the adoption of mobile applications offered by online auctioneers.

Firstly, the research can be repeated using purposive sampling to cover different age groups from this research. According to Cooper (2011, p.167), purposive sampling is used by researchers when they chose subjects “for their unique characteristics or their experience, attitudes or perceptions.” This research has only three age groups, namely, Late-teens (16 - 19), Young Adults (20 - 25) and Adults (26 or older). A future researcher can repeat the research using age groups with a range of five years part (i.e. age range from 10 to 14, 15 to 19, 20 to 24, ... 90 and above), but the number of subjects in the sample reflect the age distribution of the Hong Kong population. Another possible research in this direction is similar to the one conducted by Reisenwitz and Iyer (2007) in which they compared they compared the difference in attitude toward online shopping between younger and older baby boomers.

Secondly, the model resulted from this research can be applied to study aggregated buying. Aggregate buying is a new online shopping approach in which a seller posts an item on an intermediary’s website with a tentative price (Schneider, 2013). The intermediary then invites individual buyers to purchase the item. Based on the volume of demand for the item, the intermediary negotiates with the seller to obtain a lower price. The posted price will decrease as the volume of demand increases (Laudon and Traver, 2013). This effect is “similar to the outcome achieved by a reverse auction” (Schneider, 2013, p.267). Examples of aggregated buying include Groupon and Yahoo! Group Purchase. Aggregated buying is different from the online auction in this research because in aggregated buying, the website is actively involved in the negotiation of price. Since there is a main difference from the online auction covered in this research, it is necessary to carry out research to study the factors affecting the adoption of it by Internet users.

Thirdly, the model can be used to study the factors affecting the adoption of mobile applications offered by online auctioneers. Mobile phones and tablets have allowed the user more flexibility in terms of time and space in the buying and selling of items. This is especially significant for bidders, because the online auction is a time-sensitive service (Zhu, 2010). The increasingly wider coverage of 4G mobile phone networks provides smartphone and tablet computer users with download speeds up to 10 times

faster than 3G networks. This implies that the importance of mobile applications will rise (Hunter, 2013). A survey by Barclays (2013) showed that 53% of online businesses believed that 4G networks will increase mobile traffic to their website. The same survey showed that online businesses that developed mobile sites or apps generated 27.8% of their revenues from mobile in 2012. Hong Kong has a high mobile penetration rate, so the role of mobile applications to online auctioneers is also going to be of increasing importance. Per one thousand people in Hong Kong, there are 425 fixed Internet subscriptions, but 980 mobile broadband subscriptions (Hong Kong Census and Statistics Department, 2011). On smart phones, the eBay browsing sessions are 25% shorter and cover 50% fewer page views than on personal computers (Einav et al., 2013). This evidence suggests that the habits of using auctions on mobile phones may be different from those of using auctions using websites, so it is necessary to perform a research in this area.

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Appendix A – Letter of permission from SPEED

Adam Wong [SPEED]

From: Jack Lo [SPEED]
Sent: Friday, January 29, 2010 2:13 PM
To: Adam Wong [SPEED]
Subject: Re: Request for accessing students as research subjects

Thanks for the clarification. I approve. Jack

Sent from my iPhone

On 2010 年 1 月 29 日, at 14:09, "Adam Wong [SPEED]" <soklwong@speed-polyu.edu.hk> wrote:

> Dear Jack,
>
> Yes, I would like to cover both PolyU-SPEED and overseas programmes.
> If the sample size is enough for my research (depends on Heriot-Watt's
> feedback), then I will try only to access the students that I teach in
> both of these programmes. If a larger sample size is needed, then I
> may have to approach a few other teaching staff's classes.
>
> I hope this clarifies.
>
> Regards,
> Adam
>
> _____
> From: Jack Lo [SPEED]
> Sent: Friday, January 29, 2010 1:42 PM
> To: Adam Wong [SPEED]
> Subject: RE: Request for accessing students as research subjects
>
> Dear Adam,
>
> I need some clarification. Does your research cover both PolyU- SPEED
> award and overseas programmes?
>
> Jack
>
> -----Original Message-----
> From: Adam Wong [SPEED]
> Sent: Tuesday, January 26, 2010 6:52 PM
> To: Jack Lo [SPEED]
> Subject: Request for accessing students as research subjects
>
> Dear Jack,
>
> As you are already aware, I have been working towards my DBA degree
> for sometime now. Now I am working on my research proposal and I hope
> it will be approved within March this year. My research proposal
> mentor has agreed that students are suitable to be used as subjects
> for my research.
>
> Therefore, I would like to indicate in my research proposal that SPEED

> supports my access to students studying at SPEED as research subjects.
> For your information, my proposed research is related to the consumer
> perceived value in online auctions such as in eBay.com
>
> The students will be involved in two tasks as research subjects.
>
> In task one, the students are only required to fill out a
> questionnaire voluntarily. No information that identifies the
> individual will be collected.
>
> In task two, some students will be invited to participate in an
> interview. Again, the participation is entirely voluntarily and the
> contents of the interview will be recorded anonymously.
>
> I sincerely hope that SPEED will support my proposed research by
> allowing me to access the students as research subjects. Your kind
> consideration will be deeply appreciated.
>
> Regards,
> Adam

Appendix B – List of the theme questions and probe questions

Profiling Questions	<p>How many times have you used the OLA?</p> <p>What are the kinds of items you have bought/sold through the OLA?</p> <p>Are you a seller, a buyer or both?</p>
Theme: What do you think are the benefits of the OLA?	<p><i>Probing questions:</i></p> <p><i>What do you think of the OLA's ability to help you find buyers for your items?</i></p> <p><i>In what ways do you enjoy using the OLA?</i></p> <p><i>What do you think of the OLA's ability to help you find sellers for items you want to buy?</i></p> <p><i>What do you think of the prices in an OLA when compared with those you find in other shopping channels?</i></p> <p><i>What do you think of the opportunities that the OLA can allow you to find items that cannot be found easily else where?</i></p> <p><i>What are the other benefits that the OLA may have?</i></p>
Theme: What do you think are the transaction costs involved in the use of the OLA?	<p><i>Probing questions:</i></p> <p><i>What do you think of the time spent in using OLA to buy an item when compared with other online shopping channels?</i></p> <p><i>What do you think of the effort spent in using OLA to buy an item when compared with other online shopping channels?</i></p> <p><i>What do you think of the service charge using OLA services?</i></p> <p><i>What are the other costs that using the OLA may incur?</i></p>
Theme: What do you think are the risks involved in the use of the OLA?	<p><i>Probing questions:</i></p> <p><i>What do you think of risk of losing money because of fraud involved in the use of the OLA?</i></p> <p><i>What do you think of risk of paying too much for buying an item through the OLA?</i></p> <p><i>Have you regretted about some purchases or sales you made through the OLA? Why?</i></p> <p><i>Would you worry about your friends and family would disapprove if you get a bargain from the OLA?</i></p> <p><i>Do you think you spent more in using OLA to buy an item when compared with other online shopping channels?</i></p> <p><i>What do you think of the danger of losing your privacy because of the use of the OLA?</i></p> <p><i>What are the other risks that may be involved through the use of the OLA?</i></p>
Theme: What do you think are aspects of service quality that are important in the selection of an OLA provider?	<p><i>Probing questions:</i></p> <p><i>How important is efficiency as a factor when you choose an an OLA provider? (Explain that efficiency means web site response time and ease of navigation)</i></p> <p><i>How important is system availability as a factor when you choose an an OLA provider?</i></p> <p><i>How important is privacy as a factor when you choose an an OLA provider?</i></p> <p><i>How important is "responsiveness to user's request for help" as a factor when you choose an an OLA provider?</i></p> <p><i>How important is compensation as a factor when you choose an an</i></p>

	<p><i>OLA provider?</i></p> <p><i>How important is telephone support and online-human assistance as a factor when you choose an OLA provider? (Explain that online-human assistance includes real-time voice dialogue such as Skype, or text dialogue such as chat)</i></p> <p><i>What are the other factors that you consider important when you choose an OLA provider?</i></p>
--	---

Appendix C – Questionnaire for the survey

Factors Affecting Internet User's Adoption of Online Auctions

Dear Internet user,

My name is Adam Wong. I am conducting a study for my Doctor of Business Administration degree at the Heriot Watt University. This study examines factors affecting Internet users' adoption of the online auction (OLA). I would greatly appreciate your help in gathering data to better understand the adoption of consumer behaviour in this area. This survey should take just 10 minutes or less of your time.

Whether you have used online auctions before or not, you can contribute to this research by participating in this survey. Your participation in this survey is entirely voluntary and confidential. You will not be asked for your name. Individual responses will not be identified in the final report. All reports on the data will be in aggregated form only.

Questions or concerns regarding this study can be addressed to Adam Wong, (852) 3746 0700, Adamklwong@gmail.com. Thank you.

For each of the following question, put a tick mark ✓ in the box that is the best answer. Select only one answer.			
1.	Gender	<input type="checkbox"/> Male <input type="checkbox"/> Female	
2.	Place of Residence	<input type="checkbox"/> Hong Kong <input type="checkbox"/> Macau <input type="checkbox"/> Other parts of China	<input type="checkbox"/> The U.S.A. <input type="checkbox"/> The U.K. Other: _____
3.	Age Group	<input type="checkbox"/> 19 or below <input type="checkbox"/> 20-25 <input type="checkbox"/> 26-30	<input type="checkbox"/> 30-35 <input type="checkbox"/> 36-40 <input type="checkbox"/> Over 40
4.	Occupation	<input type="checkbox"/> Banking <input type="checkbox"/> Construction <input type="checkbox"/> Education <input type="checkbox"/> Finance <input type="checkbox"/> Full-time students	<input type="checkbox"/> Information Technology <input type="checkbox"/> Manufacturing <input type="checkbox"/> Retail <input type="checkbox"/> Tourism <input type="checkbox"/> Transport Others : _____ (please specify)
5.	Highest level of education completed	<input type="checkbox"/> Secondary school or below <input type="checkbox"/> Post-secondary (F.6-F.7) <input type="checkbox"/> Higher Diploma or Associate Degree <input type="checkbox"/> Bachelor Degree <input type="checkbox"/> Master Degree <input type="checkbox"/> Doctoral Degree	

6.	How many times have you BOUGHT or tried to BUY items in OLAs?	Include the times you tried to buy an item, although you did not win or complete the transaction. <input type="checkbox"/> Never <input type="checkbox"/> less than 5 times <input type="checkbox"/> 5 to 10 times <input type="checkbox"/> more than 10 times				
7.	How many times have you SOLD or tried to SELL items in online auctions?	Include the times you tried to sell an item, although you did not complete the transaction. <input type="checkbox"/> Never <input type="checkbox"/> less than 5 times <input type="checkbox"/> 5 to 10 times <input type="checkbox"/> more than 10 times				
If your answers are "Never" to both Q5 and Q6 above, please proceed to Q62.						
In the following questions, choose one of the following as your answer. SA = Strongly Agree, A = Agree, N = Neutral or Not Applicable, D = Disagree, SD = Strongly Disagree <i>(The items below are grouped by dimension for expositional convenience. They appeared in random order on the survey.)</i>						
8.	It enables me to find buyers for the item(s) that I want to sell quickly.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
9.	It enables me to find sellers for the item(s) that I want to buy quickly.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
10.	It helps me to lower my costs in selling items.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
11.	It helps me to lower my costs in buying items.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
12.	It helps me to get information about unusual items.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
13.	It gives me excitement when I bid for items.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
14.	It enables me to compare prices and get more information.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
15.	It is exciting when I have to meet face-to-face with people I don't know before to complete the transaction.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
16.	It enables me to find items that are difficult to find elsewhere.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
17.	I enjoy browsing the great collection of items in an auction web site.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
18.	It enables me to reduce wasting my used items.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
19.	It is not time-consuming to use.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
20.	It is easy to learn.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
21.	It is does not require a lot of effort to use.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
22.	The fee that I have to pay is reasonable.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
23.	I am pleased with the fee I have to pay for using OLA's.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
24.	I don't need to keep my ratings and the feedback I received.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
25.	My ratings and the feedback I received are NOT important to me.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>

26.	I am worried that the item I buy does not match the seller's descriptions.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
27.	I am worried that the seller will not deliver the item to me as promised.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
28.	I am worried that the item will be broken during shipping.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
29.	I am worried that I will pay higher than the market price.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
30.	I am worried that I will sell at lower than the market price.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
31.	I am worried that my I will regret buying items that I don't need.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
32.	I am worried that the people around me will disapprove my using of OLA's.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
33.	I am worried that about my personal information when I use OLA's.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
34.	When was the last time you used OLAs?	<input type="checkbox"/> Less 3 months ago <input type="checkbox"/> More than 3 months ago but less 6 months ago <input type="checkbox"/> More than 6 months ago but less 1 year ago <input type="checkbox"/> More than 1 year ago				
35.	Please name the OLA web site that you normally use. (Choose one only)	1. eBay <input type="checkbox"/> 2. Yahoo!Auctions <input type="checkbox"/> 3. Others _____				
Think about your overall experience with the OLA web site that you mainly use. Then, put a tick mark ✓ in the box that best answer each question below. Select only one answer.						
36.	The web site makes it easy to get anywhere on the site.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
37.	Information at this site is well organized.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
38.	The web site loads its pages fast.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
39.	This site is well organized.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
40.	This site is always available for business.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
41.	This site launches and runs right away.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
42.	This site does not crash.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
43.	Pages at this site do not freeze after I enter my order information.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
44.	This site provides a telephone number to reach the company.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
45.	This site has customer service representatives available online.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
46.	It offers the ability to speak to a live person if there is a problem.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
47.	It tells me what to do if my transaction is not processed.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
48.	It takes care of problems promptly.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
For OLA users, they will see the following "Thank you" message.						
Thank you for completing the survey and contributing to the research. Have a nice day!						

	<i>For non-OLA users, they will see the following questions.</i>					
49.	It enables me to find buyers for the item(s) that I want to sell quickly.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
50.	It enables me to find sellers for the item(s) that I want to buy quickly.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
51.	It helps me to lower my costs in selling items.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
52.	It helps me to lower my costs in buying items.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
53.	I am worried that the item I buy does not match the seller's descriptions.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
54.	I am worried that the seller will not deliver the item to me as promised.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
55.	I am worried that I will pay higher than the market price.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
56.	I am worried that I will sell at lower than the market price.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
57.	I am worried that the people around me will disapprove my using of OLA's.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
58.	I am worried that about my personal information when I use OLA's.	SA <input type="checkbox"/>	A <input type="checkbox"/>	N <input type="checkbox"/>	D <input type="checkbox"/>	SD <input type="checkbox"/>
Thank you for completing the survey and contributing to the research. Have a nice day!						

--- End of Questionnaire ---						

Appendix D – Demographics of the Respondents in the Online Questionnaire

Table D.1 Age of the respondents in the survey

Age				
	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 15	3	2.0	2.0	2.0
16	39	25.7	25.7	27.6
17	6	3.9	3.9	31.6
20	8	5.3	5.3	36.8
21	21	13.8	13.8	50.7
22	20	13.2	13.2	63.8
23	11	7.2	7.2	71.1
24	5	3.3	3.3	74.3
25	4	2.6	2.6	77.0
26	5	3.3	3.3	80.3
27	3	2.0	2.0	82.2
28	2	1.3	1.3	83.6
29	3	2.0	2.0	85.5
30	2	1.3	1.3	86.8
31	2	1.3	1.3	88.2
32	2	1.3	1.3	89.5
35	1	.7	.7	90.1
36	1	.7	.7	90.8
37	1	.7	.7	91.4
38	1	.7	.7	92.1
39	2	1.3	1.3	93.4
40	2	1.3	1.3	94.7
43	1	.7	.7	95.4
44	1	.7	.7	96.1
45	1	.7	.7	96.7
46	1	.7	.7	97.4
48	1	.7	.7	98.0
49	1	.7	.7	98.7
50	1	.7	.7	99.3
51	1	.7	.7	100.0
Total	152	100.0	100.0	

Figure D.1 Histogram of the age of the respondents in the survey

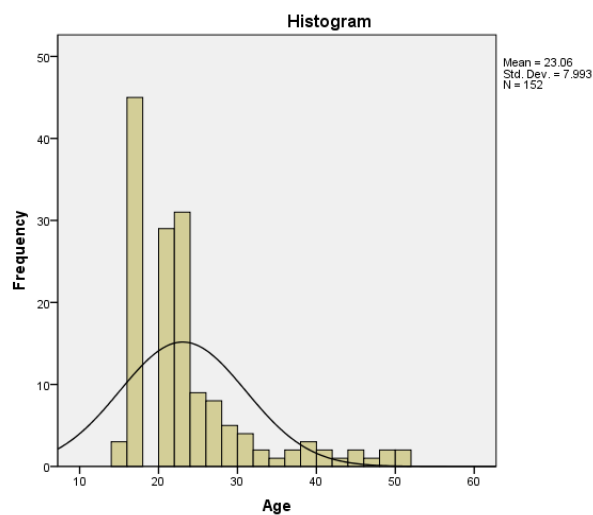


Table D.1 Occupation of the respondents in the survey

Occupation		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Others	17	11.2	11.2	11.2
	Education	7	4.6	4.6	15.8
	Finance / Banking	38	25.0	25.0	40.8
	Full-time Student	74	48.7	48.7	89.5
	Information Technology	3	2.0	2.0	91.4
	Manufacturing	5	3.3	3.3	94.7
	Retail	6	3.9	3.9	98.7
	Tourism	2	1.3	1.3	100.0
	Total	152	100.0	100.0	

Table D.2 Education level of the respondents in the survey

Education		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Secondary	52	34.2	34.2	34.2
	Post-Secondary	4	2.6	2.6	36.8
	HD or AD	14	9.2	9.2	46.1
	Bachelor	75	49.3	49.3	95.4
	Master	5	3.3	3.3	98.7
	Doctor	2	1.3	1.3	100.0
	Total	152	100.0	100.0	

Appendix E – Results of the Kruskal-Wallis test

Table E.1 Kruskal-Wallis test - perceived benefits due to gender difference

* Significant items are italicised ($p=0.005$)

Groups: Male, Female	Chi-Square	df	Sig.
Find buyers for the item(s) that I want to sell quickly.	.433	1	.511
Find sellers for the item(s) that I want to buy quickly.	.656	1	.418
Lower my costs in selling items.	.075	1	.784
Lower my costs in buying items.	.211	1	.646
Get information about unusual items.	1.098	1	.295
Gives me excitement when I bid for items.	2.755	1	.097
Compare prices and get more information.	.067	1	.795
<i>Exciting to meet face-to-face with people I don't know.</i>	3.878	1	.049
Find items that are difficult to find elsewhere.	1.142	1	.285
Enjoy browsing the great collection of items.	.368	1	.544
Reduce wasting my used items.	.581	1	.446
Groups: Late-teens, Young adults, Adults	Chi-Square	df	Sig.
Find buyers for the item(s) that I want to sell quickly.	3.019	2	.221
Find sellers for the item(s) that I want to buy quickly.	1.574	2	.455
Lower my costs in selling items.	.526	2	.769
Lower my costs in buying items.	2.092	2	.351
Get information about unusual items.	3.964	2	.138
Gives me excitement when I bid for items.	3.485	2	.175
Compare prices and get more information.	.192	2	.909
<i>Exciting to meet face-to-face with people I don't know.</i>	6.357	2	.042
Find items that are difficult to find elsewhere.	.419	2	.811
Enjoy browsing the great collection of items.	2.030	2	.362
Reduce wasting my used items.	3.002	2	.223
Groups: Buyer, Seller	Chi-Square	df	Asymp. Sig.
Find sellers for the item(s) that I want to buy quickly.	2.406	1	.121
Lower my costs in buying items.	2.240	1	.135
Get information about unusual items.	.176	1	.675
Gives me excitement when I bid for items.	.533	1	.465
Compare prices and get more information.	.840	1	.359
Exciting to meet face-to-face with people I don't know.	.702	1	.402
Find items that are difficult to find elsewhere.	.037	1	.848
Enjoy browsing the great collection of items.	.013	1	.908

Appendix F – Overall Means of the Perceived Benefits, Costs, Service quality

Table F.1 Ascending Means of benefits, risks, costs, and service quality for users

	N	Mean	Std. Deviation
Bfnt7 Compare prices and get more information.	84	2.05	.727
Bfnt5 Get information about unusual items.	84	2.17	.656
Bfnt9 Find items that are difficult to find elsewhere.	88	2.17	.820
Bfnt11 Reduce wasting my used items.	50	2.18	.825
Bfnt3 Lower my costs in selling items.	50	2.22	.790
Bfnt2 Find sellers for the item(s) that I want to buy quickly.	88	2.24	.884
Bfnt4 Lower my costs in buying items.	88	2.28	.802
Bfnt10 Enjoy browsing the great collection of items in an auction web site.	84	2.30	.861
<i>Bfnt1 Find buyers for the item(s) that I want to sell quickly. *</i>	50	2.40	.990
<i>Bfnt6 Gives me excitement when I bid for items. *</i>	88	2.52	.971
Bfnt8 Exciting to meet face-to-face with people I don't know before to complete the transaction.	84	2.93	.889
Cost2 It is easy to learn.	84	2.13	.741
Cost4 The fee that I have to pay is reasonable.	84	2.30	.788
<i>Cost3 It is does not require a lot of effort to use. *</i>	84	2.46	.783
<i>Cost5 I am pleased with the fee I have to pay for using OLA's. *</i>	84	2.52	.799
<i>Cost1 It is not time-consuming to use. *</i>	84	2.55	.962
Cost6 I don't need to keep my ratings and the feedback I received.	84	2.93	.926
Cost7 My ratings and the feedback I received are NOT important to me.	84	3.43	.935
Risk1 The item I buy does not match the seller's descriptions.	88	1.92	.847
<i>Risk8 My personal information being misused when I use OLA's. *</i>	84	2.31	1.018
<i>Risk3 The item will be broken during shipping. *</i>	84	2.33	.923
<i>Risk2 The seller will not deliver the item to me as promised. *</i>	88	2.47	.982
Risk6 I will regret buying items that I don't need.	88	2.74	1.011
Risk5 I will sell at lower than the market price.	50	2.86	.990
Risk4 I will pay higher than the market price.	88	2.88	.969
Risk7 People around me will disapprove my using of OLA's.	84	3.27	.910
Efcy1 The web site makes it easy to get anywhere on the site.	84	2.02	.640
Efcy4 This site is well organized.	84	2.15	.736
Efcy3 The web site loads its pages fast.	84	2.19	.702
SQ_Mean_Avbl	84	2.21	.463
Efcy2 Information at this site is well organized.	84	2.33	.734
<i>Rsp2 It takes care of problems promptly. *</i>	84	2.45	.735
<i>Rsp1 It tells me what to do if my transaction is not processed. *</i>	84	2.46	.667
SQ_Mean_Cont	84	2.80	.663

* - These are found to be not significantly different from the value of 2.5 in the one-sample t-test.

Table F.2 Ascending Means of Benefits, Costs, Risks perceived for Non-users

	N	Mean	Std. Deviation
<i>NUBfnt1 Find sellers for items I want to buy.*</i>	61	2.49	.698
<i>NUBfnt3 Find buyers for items I want to sell.*</i>	61	2.51	.698
<i>NUBfnt4 Lower my costs in selling.*</i>	61	2.66	.704
NUBfnt2 Lower my costs in buying.	61	2.79	.686
<i>NUCost2 I don't want to create another set of user name and password.*</i>	59	2.64	.943
NUCost1 I don't want to learn to use OLA web sites.	59	2.83	.950
NURisk2 The item I buy will not match the seller's descriptions	61	1.97	.752
NURisk3 The seller will not send the item to me as promised.	61	2.10	.831
NURisk6 My personal information will be used by the other party for illegal purposes.	61	2.11	.915
NURisk5 The buyer will not pay as promised.	61	2.16	.800
<i>NURisk1 I will buy items at higher than the market price.*</i>	61	2.52	.868
<i>NURisk4 I will sell items at lower than the market price.*</i>	61	2.66	.772
NURisk7 People around me will dislike my using of OLA's.	59	3.14	.973

* - These are found to be not significantly different from the value of 2.5 in the one-sample t-test.

Appendix G – Fees Charged by Yahoo!Auction

Role	Service	Charge
Seller	Listing of item for sale	HK\$3 per item
	Top of the page	
	Top of the page	
Buyer	Browsing / Registration / Asking questions / Bidding / Purchasing	Free

Appendix H – The Yahoo!Auction Hong Kong home page

Figure H.1 The Yahoo!Auction Hong Kong home page

It shows that the did not have the “Wanted” category, and it did not show the value proposition of finding buyers quickly.



Figure H.2 Price Schedule of Yahoo!Auction Hong Kong

It shows that Yahoo only has a simple fee schedule, which may not be attractive to heavy users. (Captured on 8th Feb. 2013)

Yahoo!拍賣刊登費

收費計算

拍賣品分層收費
 一般拍賣品類別刊登費採取分層收費的計算方法，大致上是基於賣家刊登的拍賣品，按定的開售價或拍賣底價作計算，以較高者為計算基礎。換言之開售價或拍賣底價越高，所需繳付的刊登費用亦隨之越高。

拍賣品	一般拍賣品類別
刊登費 (以每件拍賣品計算)	分層收費 開售價或拍賣底價(以較高金額計算) 刊登費
	HK\$0.01-99 HK\$1
	HK\$100-199 HK\$2
	HK\$200-399 HK\$3
	HK\$400-499 HK\$4
	HK\$500-699 HK\$5
	HK\$700或以上 HK\$6
每次刊登時間	10日
免費自動重新提交	2次(當拍賣品沒有賣出買家,可獲免費自動重新提交兩次。)
立即購買	有
改動分類	不可以
留下賣家聯絡資料	不可以


Figure H.3 Price Schedule of eBay

It shows that eBay has a sophisticated fee schedule, which caters for the needs of different types of users. (Captured on 28th Jan. 2013)

Compare eBay Stores subscriptions				
Store levels have different subscription and fixed price insertion fees, and the higher store levels offer lower insertion fees.				
	No store	Basic	Premium	Anchor
Subscription fee	\$0	\$15.95	\$49.95	\$299.95
Auction insertion fees	\$0	\$1	\$1	\$1
Fixed price insertion fees	\$3	\$1	\$0	\$0
Auction final value fees	\$10	\$6	\$6	\$6
Fixed price final value fees	\$7	\$7	\$7	\$7
eBay-hosted pictures	Free	Free	Free	Free
Total estimated fees	\$20	\$31	\$64	\$314
Total estimated sales (based on the numbers you entered): \$200				

Figure H.4 “Report this item” Facility in Yahoo!Auction

It shows that the auctioneer facilities users to report listings or sellers that violate the rules regarding the use of the online auction web site. (Captured on 8th Feb. 2013)

**檢舉拍賣商品：三星 samsung galaxy Y Duos S6102 高清 保護貼 screen protector 螢幕 保護貼 保護膜 買四送一**

檢舉拍賣商品是一個守望相助的功能，主要是讓拍賣服務的會員可以參與對商品的審查並且提供意見，以共同來維護安全交易環境。

· 檢舉方式與注意事項

→會員條件：評價指數必須大於 +8 的人才能提出檢舉與意見。

→檢舉方式：選擇[檢舉項目]與填寫[您的意見]（**當有1位會員檢舉時，將立即通知管理部門依禁止刊登的拍賣品與拍賣用戶守則給予適當處理**）。

→注意事項：經過管理部門審查之後，若有違規者則取消拍賣並紀錄，若內容無違規者，商品仍可繼續刊登。
凡是惡意的檢舉或不當的使用本制度時，將會被警告或停權處分。

如您要投訴的原因是有關以下的規則，您可透過網上查詢表格向我們反映並提供詳細資料予我們再嚴建：

→使用及刊登未經授權的文字、圖片或商標（請提供相關拍賣品資料及文字、圖片或商標的擁有權證明資料）

→影響投標活動（請提供相關拍賣品資料及如何影響投標活動的情況）

→干擾拍賣服務（請提供相關拍賣品資料及如何干擾拍賣服務的情況）

檢舉拍賣商品 說明

檢舉項目：
[---]
您的意見：

送出

取消

檢舉記錄

不正確的底價或直接購買價	: 0
懷疑私下交易(如禁止下標)	: 0
提供或索取聯絡及個人資料	: 0
多項物品於同一刊登項目內發售	: 0
使用與拍賣品無關的關鍵字	: 0
將拍賣品刊登於不適當的類別	: 0
刊登內容與應出(拍)品中、中標) :	0